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TOWARD CLOSER RELATIONS BETWEEN THEORY AND
RESEARCH: A PROCEDURE AND AN EXAMPLE *

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A METHOD of research procedure is suggested here whereby empirical investigations may be pursued with a degree of theoretical relevance despite the existence of a high degree of theoretical incoherence in the area of investigation. Some theoretical aspects of a research program in which this procedure is employed are presented by way of example. Although this example deals with relationships between stratification and prejudice, the general procedure may be useful in other areas of sociology.

There has been abundant treatment in the sociological literature of the relationship between social class and prejudice; nevertheless the theory concerning this aspect of our society remains particularly incoherent. Knowledge consists of numerous contradictory theories and fragments of theories that have been constructed to explain "empirical relationships," which may or may not exist. This confusion is due largely to the failure of the proponents of particular theories to subject their theories to empirical test. Moreover, where such tests are made there is often a tendency to select interpretations consistent with the initial theory without due consideration of plausible though contradictory interpretations.

It follows that where there is a high degree of theoretical incoherence in a given area there cannot be theoretically guided research in the strict sense, and where there is a lack of theoretically guided research there cannot

be much in the way of development of coherent theory. Perhaps all researchers in sociology face this dilemma, regardless of the area of inquiry.

When faced with this dilemma, the researcher often takes one of the following alternatives:

1. He resorts to a rigid empiricism in which the "facts" (meaning the empirical findings) are seen to speak for themselves. The utility of such research is often bound to the particular moment, place, and project. Examples of this in the sociological literature are legion.

2. He selects from among the many contradictory propositions already held in the field a particular proposition or set of propositions which are relevant to the problem at hand and which appear to make sense in terms of what the investigator already knows about the aspect of society under investigation. The difficulty here is that in theoretically under-developed areas what one "already knows" is not reliable enough to provide more than an arbitrary basis for the selection of one hypothesis or its opposite before the fact, or one theoretical interpretation in preference to its diametric opposite after the fact.

3. He creates a new set of propositions of his own. Although the selection process involved in 2 (above) may result in a "new theory," we refer here to the introduction of new propositions in addition to those extant in the field.

THE PROCEDURE

The procedure proposed in this paper permits the utilization of all the theoretical

* This paper is part of a program of studies of intergroup relations subsidized by the Graduate School of Indiana University. Present phases are being pursued under a Faculty Research Fellowship of the Social Science Research Council.

propositions in any area as they exist, that is, with all their contradictions and inadequacies. This procedure involves (a) explicitly listing a comprehensive range of *presupposed empirical relationships*,¹ many of them diametrically opposed to one another, which might possibly turn up in the research at hand and (b) explicitly listing a range of interpretations, many of them diametrically opposed to one another, for each possible empirical finding. Then, through empirical investigation the relationships that actually obtain are selected from the morass of "presupposed empirical relationships" initially listed. All of the other initially proposed empirical relationships are discarded. The array of alternative interpretations attached to them in the original presentation are also eliminated from consideration as interpretations of the findings.²

¹ The term "empirical relationship" is used here not to distinguish it from "untested relationship," but rather to distinguish between relationships described on the lowest level of abstraction and which have been or can be established directly by research (e.g., "upper class persons are less prejudiced than lower class persons") from more abstract "theoretical propositions," which may be used to interpret relationships on the lower level of abstraction (e.g., "prejudice is a function of anxiety regarding status, and upper class persons have greater security regarding status than do persons lower in the structure.") This usage follows that of Robert K. Merton, "Sociological Theory," *American Journal of Sociology*, 50 (May, 1945), pp. 462-473, and "The Bearing of Empirical Research upon the Development of Sociological Theory," *American Sociological Review*, 13 (October, 1948), pp. 505-515. Actually, the procedure represents a compromise of an original attempt to design a research program in such a way that it would meet some of the requirements outlined by Merton regarding the relationship between theory and research.

Our "presupposed empirical relationships" are not to be confused with hypotheses but are by deliberate design, contradictory to one another. The very function of hypotheses requires that they have direction; the hypotheses for a particular investigation cannot be contradictory to one another and still be hypotheses. Our "presupposed empirical relationships" are hypothetical, but they are not hypotheses.

² When we eliminate those "strings of interpretations" attached to "presupposed empirical relationships" that fail to survive the research test, this does not mean that these have been proved invalid in any final sense in that "sociological theory is forever rid of these propositions" or, indeed ought to be. They are simply eliminated from consideration as interpretations of the particular relationships that have been established by the research.

The final step in this phase of the research cycle involves the selection of the correct theoretical interpretations from the array of contradictory though "plausible" interpretations attached to the empirical relationships that have survived the research test. This last task, though difficult, is perhaps less difficult as well as more accurate than where the usual procedure is followed. Because the contradictory interpretations are listed before the fact of the empirical investigation, the likelihood is increased that the investigator will have included in his research plan provisions (e.g., questions, items, and other observational devices) explicitly designed to enable him after the fact to make selection from among the contradictory interpretations originally listed. Moreover, where a particular set of interpretations does not emerge as being more plausible than others in its list, the present procedure, by having made contradictions explicit, encourages the investigator to set up new research phases to help him in his selection of interpretations.

It may very well be that many investigators actually go through a process of the kind outlined here: they imagine all kinds of possible empirical relationships and they imagine all kinds of possible interpretations of these relationships. If this is the case, the present discussion becomes an argument for making the process explicit. It is doubtful, however, that most investigators follow such procedure; the fact is that most researchers start with specific hypotheses, and hypotheses imply at least some preliminary selection of interpretations.³

THE EXAMPLE

We turn now to consideration of a research program in which the procedure suggested

They may very well be valid and theoretically useful in other research contexts.

³ The formulation of specific hypotheses implies selection of interpretations if the hypotheses are derived (as they should be) from more abstract theoretical propositions. Then, if the hypothesized relationships are upheld by research, they will presumably be interpreted in terms of the same theoretical propositions that originally suggested the hypotheses. If, however, as in many cases, the hypotheses have not been derived from theory, then perhaps it would be less misleading simply to ask questions rather than to state hypotheses. Hypotheses imply theoretical guidance; questions do not.

here is being employed. Theoretical aspects of two earlier projects in the program are presented here. These studies⁴ were designed to establish empirical relationships between social class and prejudice in order that the broad range of extant theoretical propositions concerning class and prejudice may be narrowed.

Following are some sample listings of the presupposed empirical relationships that might possibly turn up in investigations of the relationship between social class and

⁴ For details regarding these investigations see Frank R. Westie, "Negro-White Status Differentials and Social Distance," *American Sociological Review*, 17 (October, 1952) pp. 550-558, and Frank R. Westie and David H. Howard, "Social Status Differentials and the Race Attitude of Negroes," *American Sociological Review*, 19 (October, 1954), pp. 584-591.

prejudice. Under each presupposed empirical relationship is a list of more general theoretical propositions that might be used to relate the particular relationship to sociological knowledge on a broader level. Although a rather comprehensive list of possible empirical relationships and their interpretations was prepared to guide this research, space permits only a few of these relationships and their accompanying strings of interpretations. For illustrative purposes only those pertaining to the race attitudes of upper-class whites and lower-class whites have been selected.⁵

⁵ Complete listings are available in mimeographed form. These pertain to the attitudes of Negroes of various classes as well as to the attitudes of whites of different classes.

PRE-SUPPOSED EMPIRICAL RELATIONSHIPS AND THEIR INTERPRETATIONS⁶

Re: The Attitudes of Upper-Class Whites

Empirical relationship #1:

Of all classes in white community, upper is least prejudiced.

Interpretation 1A: Upper-class better educated; education conducive to "liberal" outlook; prejudice a function of ignorance.

Interpretation 1B: Prejudice a function of psychological insecurity, especially re: status; upper-class person more secure than those below him; secure person does not need Negro for scapegoat purposes.

Interpretation 1C: Substitute "economic" for "psychological" in 1B (above); upper-class has greatest economic security.

Interpretation 1D: Upper-class expects greater conformity on part of its members, at least on verbal level, to the value-premises of the "American Creed."

Empirical relationship #2:

Of all classes in white community, upper is most prejudiced.

Interpretation 2A: Upper-class has greatest stake in prejudice and discrimination; discriminatory wages for Negroes depress wages for white workers as well and benefit white employer class.

Interpretation 2B: Upper-class most conservative; prejudice and discrimination are part of *status quo* which upper class strives hardest to maintain.

Interpretation 2C: Race relations in America are essentially inter-caste relations and as such are a stratification phenomenon; upper-class persons most likely to respond in terms of status categories in relations with status out-groups, in this case the Negro group; upper

⁶ Most of the interpretations enumerated exist as part of the sociological literature on intergroup relations essentially in the form in which they are presented here. Some of them, however, are "once removed" from "parent propositions," which are not presented here. The reader will note that all of these interpretations can become, in other research contexts, empirical relationships and subject to investigation and interpretation themselves, e.g., in the case of Interpretation 2B, the question can be raised: "Has it been established, empirically, that the upper class is most conservative?"

It will also be noted that some rather important possible interpretations are not included in these lists. For example, there are no direct references to

social mobility as having possible "explanatory power." These omissions are due to space limitations and the fact that some of these omitted interpretations, though relevant to the comparison of the upper and lower classes, are more relevant to comparisons of the middle class to other classes and the comparisons of the attitudes of Negroes to the attitudes of whites.

Space requires that we eliminate discussion of several questions of theoretical import: e.g. definitions of "attitude" and the relationship of attitudes to other aspects of behavior; the logical jump involved in studying socio-economic status and generalizing about social classes; definitions of class.

Empirical relationship #1—Continued

Interpretation 1E: Upper-class person's status so secure he can afford to be "democratic" in relations with Negroes without fear of losing status in eyes of other whites or of Negroes. (This differs from 1B and 1C, above, in that it is derived from "conformity theory.")

Interpretation 1F: Prejudice is a function of competition for values which are non-sharable, at least within the context of the American Society (largely economic and status-related values); upper-class of whites is farthest removed from competition (especially of the *direct*, face-to-face kind) for status symbols, either economic or otherwise.

Interpretation 1G: Upper-class person in North has virtually no contacts with Negro's "way of life"; thus does not develop prejudices based on observations of differences in style of life, ("well-earned reputation theory").

Empirical relationship #3:

Of all classes in the white community, the lower class is least prejudiced toward Negroes.

Interpretation 3A: Child-rearing practices less rigid and demanding on lower-class level; thus the lower-class person is less likely to develop extreme power orientations, rigidity of personality, etc.

Interpretation 3B: The mere scratching for a living on the lower-class level leaves little time and energy for status striving, of which race discrimination is but one manifestation.

Interpretation 3C: The corporate class consciousness among lower-class white workers (especially among union men) leads to their including Negroes in class and interest definitions.

Interpretation 3D: Lower-class persons have greatest status security because they are, in effect, on the ground rather than *on* the status ladder; hence they have no place to fall; prejudice is a function of insecurity regarding status.

Interpretation 3E: Fewer myths re: Negro inferiority perpetuated in lower-class culture because these myths are essentially middle- and upper-class devices for rationalizing departures from Christian Democratic ideals espoused by middle and upper classes; prejudice is a function of culturally transmitted myths.

Interpretation 3F: Because he is at the bottom of the status ladder, the lower-class white need have no fear of losing status by fraternizing with the low-status Negro.*

* Despite surface similarities, 3D and 3F are derived from different theories—the former from the "frustration-aggression" theory, the latter from the "conformity" theory.

Empirical relationship #2—Continued

class preoccupation with maintenance of social distance carries over into race relations.

Interpretation 2D: Upper-class person has few contacts with Negroes and these contacts usually of master-servant, boss-employee variety—contacts which are characterized by extremes of social distance.

Interpretation 2E: Where characteristic relations are of master-servant type, the white man is most likely to develop convictions of the Negro's innate inferiority.

Interpretation 2F: Upper-class person's status so secure he can afford frankly to express his prejudices without fear of appearing "undemocratic" and losing status.

Empirical relationship #4:

Of all classes in the white community, the lower class is most prejudiced toward Negroes.

Interpretation 4A: Lower-class poorly educated; prejudice a function of ignorance; uneducated most gullible re: myths of Negro inferiority.

Interpretation 4B: Lower-class person most frustrated in designs for economic security, status, health, etc.; Negro is socially approved object of aggression (scapegoat) that is not likely to strike back.

Interpretation 4C: Lower-class person's failure to achieve economic and social success is, in America, a reflection on his personal worth; Negro minority serves as reference group that provides lower-class white with a more satisfying conception of his own status.†

Interpretation 4D: Psychological aggression quite equally shared across class lines; lower-class, however, has fewer and less effective controls over expression of aggression.

Interpretation 4E: Lower-class does not require conformity to the "American Creed" to the same extent as do higher classes; lower-class person need not fear loss of status in verbalizing prejudice; when one is at bottom there is no place to fall.

Interpretation 4F: Prejudice is a function of competition for both status and economic values, and competition is most intense at lower level because: (a) the scarcity of these values

† Although 4B and 4C are often rolled together in "explanations" of prejudice, they actually follow from entirely different theories. 4B is derived from the "scapegoat theory." 4C is from "reference group theory."

Empirical relationship #3—Continued

Interpretation 3G: Of all white classes lower-class persons have least status consciousness, and race relations are primarily a status relationship. (Differs from 3F inasmuch as 3F assumes status consciousness.)

Interpretation 3H: Lower-class more likely to see Negroes on social level roughly equivalent to their own (contacts not of master-servant type); lower-class not as likely to develop images of Negro as innately inferior.

Empirical relationship #4—Continued

is most acute at lower level and (b) competition between Negroes and whites is most *direct* at this level, where Negroes and whites compete for same jobs.

Interpretation 4G: Lower-class, urban white most likely to have first hand contact with Negro's "way of life"; develops prejudice on observations of differences ("well-earned reputation" theory).

This presentation requires a number of qualifications, only a few of which may be mentioned here. It must be pointed out that, though the range of empirical relationships is finite (or at least should be if the empirical questions originally asked are sufficiently specific), the range of possible interpretations is seemingly infinite. Thus the limits of our strings of interpretations are somewhat more tenuous than the limits of our range of possible empirical findings. In establishing the limits to our strings of interpretation we have relied largely on the literature on prejudice and on the various independent variables related to prejudice (e.g., status, mobility, education.) Thus the procedure employed here leaves considerable possibility that any particular string of interpretations may be (a) unduly truncated insofar as it is subject to limitations of the theoretical knowledge of the investigator, or (b) stretched too thin insofar as the imagination of the investigator enters the picture.⁷ In order to avoid the latter an attempt was made to limit the interpretations in the before-the-fact lists to those that exist as propositions in the scientific and academic literature or that follow as logical consequences of extant theoretical formulations.

In this presentation it has been necessary to omit all discussion of the relationship of the various alternative interpretations to one another. In actually employing this procedure it is most efficient to indicate which interpretations are related to which other interpretations in our system of lists and, moreover, to indicate the nature of the relationship. This system of inter-relationships becomes

extremely complex. For example, virtually all propositions that pertain to status are related to one another (if only as implying empirical contradictions) and these in turn are related to propositions regarding mobility, and these in turn to those regarding "inner" and "other" directedness, and these relate to most methodological propositions regarding differences between classes in frankness and honesty in revealing race attitudes.

Specifying the nature of the connections between the various propositions enables one proposition to "drag others down with it," so to speak, if and when it fails to meet empirical requirements. On the other hand, where empirical evidence lends confidence in a particular proposition, other related propositions also acquire some degree of support.

The procedure may be summarized as follows:

1. List all "pre-supposed empirical relationships."
2. For each of these list a "range of possible interpretations."
3. Conduct the actual investigation to find out which of the "pre-supposed empirical relationships" actually exist:
4. Throw out those "pre-supposed empirical relationships" that fail to survive the research test and with them the strings of interpretations attached to them.
5. Select, through subsequent empirical investigations, the best interpretations from among the many contradictory interpretations attached to the surviving empirical relationships.

At the present level of theoretical development in many areas of sociology, the selection of one interpretation from its opposite (phase 5) must often be through empirical test. Thus, phase 5 in the first research cycle

⁷ It seems to us that the greater error would lie on the side of cutting the strings too short. Actually, the strings of interpretations presented here have been trimmed in the interest of space economy.

(above) becomes phase 1 in the second research cycle.

The advantages of this procedure may be summarized as follows:

1. It minimizes the likelihood that the investigator will present to himself and the world a prematurely coherent set of propositions in which contradictory propositions, however plausible, are ignored. The procedure requires that a range of contradictory propositions be made explicit before the empirical investigation, and it should conduce to theoretical humility after the fact. Projects are less likely to culminate in particularistic interpretations in terms of a single theory.

2. This procedure increases the likelihood of the researcher's building into his research-design provisions for the test of a variety of theoretical interpretations of a number of possible empirical findings.

3. The proposed procedure makes the researcher more aware of the total significance of his empirical findings. Where, as in the usual procedure, the investigator is concerned with upholding or refuting a particular

theory, he may be completely unaware of the fact that his empirical findings actually add confirmation, or doubt, as the case may be, to numerous other theoretical propositions extant in the area or in related areas.

4. The procedure employed here makes for continuity of research. At the present state of theoretical development in sociology it is rare that clear-cut, unambiguous interpretations are possible after a single research project. Where there is little in the way of theory to guide interpretation, subsequent empirical investigations of alternative interpretations are often necessary. Where alternate interpretations are made explicit from the beginning of the project, they are more likely to survive as alternatives after the fact of investigation: the present procedure encourages research programs rather than isolated projects.⁸

⁸ E.g., in the case of present research program, projects are now underway which will enable us to select with greater confidence a narrower range of interpretations. The presupposed empirical relationships of these subsequent projects existed as alternative interpretations in previous phases.

CONFIDENCE INTERVALS FOR CLUSTERED SAMPLES *

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STANDARD statistical literature has been developed almost entirely in terms of independent observations obtained by simple random sampling (s.r.s.). The statistical tests and confidence intervals one finds in textbooks and in journal articles are based on the assumption that the sample observations were selected independently, at random. Although this assumption either appears (unnoticed) in "fine print" or not at all, it constitutes the basis of all confidence intervals and tests of hypotheses; their validity is based on it. The ubiquity of the s.r.s. assumption in statistical theory can be explained by the basic nature of s.r.s. and by its facilitation of interesting theoretical results.

On the other hand, most social research, especially survey work, is in fact carried out by means of complex sample designs. Simple random selection of human populations is a rare phenomenon, limited to small and confined populations. Socially important human populations are usually large and widely scattered, so that a simple random selection of them would prove in most cases to be uneconomical and impractical. The complexities of good sample design occur in the attempt to tailor economically the available research resources to the wide and irregular dispersal of important populations.

Thus the complexities of sampling problems are often reflected openly and clearly in sample design; but important statistical consequences of complex designs are often ignored. By complexities I mean departures from s.r.s. By designs or sample designs I

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mean the combined effects of selection and estimation either in a survey or an experiment. The problems caused by complex design, by the lack of independence in selection, may also arise in experimental design. Although the arguments are developed chiefly in terms of the problems of sample survey design they apply as well to experimental design.¹

The principal methods of departure from simple random selection are clustering, stratification, unequal probabilities of selection and systematic sampling. Among these methods clustering most frequently causes the largest effects. "Clustering" is the selection of observational units (elements, cases, individuals) in clusters or groups, rather than individually. The researcher uses these clusters as sampling units to make the procedures of selection and/or observation more economical and convenient. For example: (1) In studies of student attitudes and behavior, classes of students are selected into the sample. (2) In national interview surveys, counties, blocks and households frequently serve as clusters of persons. (3) In researches dealing with employees of a firm, work groups are used as sampling units. In each of these

situations the sampling units comprise clusters of the individuals who form the basic elements of the investigation for drawing inferences from the sample to the population.

The researcher generally finds it economical and convenient to use for his sampling units existing clusters (blocks, cities, counties, work groups, platoons, school classes, etc.). These clusters usually exist as ecological, perhaps geographical units, and sometimes as "psychological groups" as well. The individuals in these units tend to resemble each other—there is usually some *homogeneity* of characteristics, of attitudes, of behavior—but homogeneity is generally not complete. It may be due to common selective factors, or to joint exposure to the same effects, or to mutual influence (interaction), or to some combination of these three causes.² Because of this homogeneity, the use of these clusters for sampling units has definite consequences: it destroys the independence of the characteristics of the sample elements. The correspondence with the "well-mixed urn," inherent in the assumption of independence, is negated; and formulas that depend on that assumption fail to apply.

This problem does not exist if the units or groups (independently and randomly selected) are themselves the elements of the analysis. It arises only when the sampling units used in the selection process are clusters of the elements that constitute the units of analysis. As a consequence there are often large mistakes in the construction of confidence intervals and of tests of hypotheses.

NATURE AND MAGNITUDE OF THE PROBLEM

Let us suppose that we have a body of data obtained from a complex sample design,

¹ In survey research the complexities of sample design have recently received explicit recognition and theoretical development in accord with the explicit definitions of the population from which the sample is drawn. There are now five fine textbooks dealing with the methods of survey sampling: W. G. Cochran, *Sampling Techniques*, New York: Wiley and Sons, 1953; W. E. Deming, *Some Theory of Sampling*, New York: Wiley and Sons, 1947; M. H. Hansen, W. N. Hurwitz and W. G. Madow, *Sample Survey Methods and Theory*, New York: Wiley and Sons, 1953; P. V. Sukhatme, *Sampling Theory of Surveys with Applications*, Ames: Iowa State College Press, 1954; F. Yates, *Sampling Methods for Censuses and Surveys*, New York: Hafner, 2nd. ed., 1953.

A brief, simplified treatment was attempted in Leslie Kish, "Selection of A Sample," Ch. 5 in Leon Festinger and Daniel Katz, editors, *Research Methods in the Behavioral Sciences*, New York: Dryden Press, 1953.

Experimental design has flourished in the numbers and complexities of the effects it undertakes to investigate simultaneously and efficiently, and in the intricate control of many variables. However, it has largely neglected until recently the joint problems of sampling and of specifying the population to which its inferences apply. See M. B. Wilk and O. Kempthorne, "Fixed, Mixed, and Random Models," *Journal of the American Statistical Association*, 50 (December, 1955), pp. 1144-1167.

² The homogeneity of individuals within units may be measured by ρ_{ho} , the coefficient of intraclass correlation; for most units and for most characteristics it is found to be positive. It measures that proportion of the total variance among the elements of a population which is "explainable" by belonging to the clusters. This homogeneity increases the variance of the mean, and of similar statistics, when compared with s.r.s. selections of the same number of elements (see below). Brief descriptions of the intraclass correlation may be found in Deming, *op. cit.*; in Hansen, Hurwitz and Madow, *op. cit.*; in Kish, *op. cit.*; and L. Kish, "Differentiation in Metropolitan Areas," *American Sociological Review*, 19 (August, 1954), pp. 391-392.

in which the assumptions of independence have not been fulfilled. The usual textbook formulas that depend on these assumptions cannot then be applied validly to the data at hand. Is it dangerous to violate the assumption of independence? Some laxity in statistical rigor may arise from the knowledge of two facts. First, this assumption is very commonly disregarded. Second, most statistics involve other assumptions; these, too, are often disregarded. For example, moderate departures from normality generally have little effect on the confidence coefficients; the "finite population correction" $\sqrt{1 - \frac{n}{N}}$ results in the negligible factor

.99, even when the sampling rate $\frac{n}{N}$ is as

large as $\frac{1}{50}$; using n instead of $(n-1)$ in obtaining the sample variance will cause little trouble for samples as small as 50; and so on.

takes are frequent because complex clustered samples provide much of the best research data in the social sciences. The mistakes are often large because the homogeneity among the elements of the cluster, ignored in the use of s.r.s. formulas for variances, often results in gross mistakes in the construction of confidence intervals.

Table 1 shows the nature of hypothetical mistakes made when s.r.s. formulas are used to compute confidence intervals for data from complex samples. Columns 1-3 give respectively, the amount of distortion of the confidence intervals due to using s.r.s. formulas when they do not apply: column 1, the ratio of the actual variance to s.r.s. variance; column 2, the inverse of this ratio; column 3, the square roots of the numbers of column 2, gives the ratios by which the standard errors (and the confidence intervals) are shortened by mistake if s.r.s. variances are used in place of the correct variance formulas. The results of the mistakes are given in

TABLE 1. EFFECTS OF DISTORTED CONFIDENCE INTERVALS ON PROBABILITY STATEMENTS

Amount of Distortion of the Confidence Interval			Probabilities of Incorrect Statements When Two-Sided Confidence Coefficients Are Aimed At:			
True Var.	s.r.s. Var.	s.r.s. S.E.	P=.90	P=.95	P=.99	P=.999
s.r.s. Var.	True Var.	True S.E.	(4)	(5)	(6)	(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0.8	1.25	1.12	.064	.028	.004	.0001
1.0	1.00	1.00	.100	.050	.010	.001
1.2	.83	.92	.133	.074	.019	.003
1.5	.67	.82	.179	.110	.035	.007
2.0	.50	.71	.242	.164	.067	.019
3.0	.33	.58	.342	.258	.137	.057
5.0	.20	.45	.462	.381	.249	.141
10.0	.10	.32	.603	.533	.415	.298

But we may not disregard the assumption of independence without serious consequences. In the social sciences the use of s.r.s. formulas on data from complex samples is now the most frequent source of gross mistakes in the construction of confidence statements and tests of hypotheses.³ The mis-

columns 4-7. They show the probabilities of excluding the true population value for different levels of the confidence coefficient. For example, column 5 deals with the P=.95 level of confidence. The use of ± 1.96 standard errors, computed correctly, allows for errors .05 of the time. The last row shows that if by mistake one is actually using $1.96 \times .32 = .63$ standard errors, then he makes errors .533 of the time.

True Var. Values of s.r.s. Var. of 1.2 to 2 are found frequently in well designed samples; mistaken use of s.r.s. formulas would lead to incorrect statements .074 to .164 of the time,

³ A rival for this dubious honor is that other, somewhat more widely known, *bête noire*: hunting through masses of comparisons until one finds a rare "significant" difference, and then treating the "test of significance" as if the experiment had been designed explicitly for that test. This indictment may be extended to the biological and other sciences by persons more familiar with research in those fields.

instead of the .05 level the researcher intended to use. But we have also found values from 3 to 10 times the s.r.s. variance; ignorance of the true formula would lead the researcher to substitute unknowingly for the .05 level of confidence some level from .258 to .533!

One may look at the effect of clustering in terms of the increase of the variance over that of a simple random sample of the same number of elements. This is approximately

$$\frac{\text{True Var.}}{\text{s.r.s. Var.}} = [1 + \rho(\bar{a} - 1)]$$

where rho is the coefficient of intraclass correlation and \bar{a} is the number of elements in the sample cluster. This formula also holds fairly well when \bar{a} is an *average* cluster size. Neither a small rho nor a small \bar{a} alone gives assurance that the factor of clustering may be neglected safely. With a rho as small as .04 a sample of infantry companies of size

$\bar{a}=101$ would lead to a ratio of $\frac{\text{True Var.}}{\text{s.r.s. Var.}}=5$,

hence to the distortion of the confidence level from .05 to .381. With work groups as small as $\bar{a}=6$, a rho of 0.2 results in a ratio of 2, hence in distorting the confidence level from .05 to .164.

The distortions caused by the improper use of s.r.s. formulas are presented in terms of confidence intervals. For tests of hypotheses there are similar effects in rejecting the null hypothesis too often.

How is it that a procedure that leads to such large mistakes is still widely practiced? One answer may lie in the fact that this procedure has been relatively successful in the physical sciences and has consequently gained sanction. There may be three reasons why this matter has received less notice in physical sciences. (1) In some of the physical sciences (especially in those that serve as "models") the error due to uncontrolled causes is sometimes relatively unimportant. (2) Frequently s.r.s. selection or a good approximation may be used with ease. (3) When clustered samples are taken, the intraclass correlation of the units in the clusters is negligible. In other words, the characteristic to be measured is "fairly randomly" distributed in the clusters. For similar reasons the crudest judgment sampling methods have often yielded reliable results in the physical sciences—methods not acceptable in the so-

cial sciences, because of their potentially large biases. On the other hand, in social science research all of these three factors are often absent; hence, the effect of clustering must be considered for confidence intervals and tests of hypotheses to be valid.

EMPIRICAL EVIDENCE

The reader may wish to see the magnitude of the effects as they arise in some specific situations. We have computed the variances for a variety of survey characteristics over the past ten years in the Sampling Section of the Survey Research Center. Table 2 gives a few examples to illustrate some contrasting situations. Other organizations with good probability samples have had similar experiences. In particular the releases of the *Current Population Surveys* of the U. S. Census Bureau present interesting tables of sampling errors.

For Item 1 actual variances range in magnitude from the same as s.r.s. variance to 1.8 times s.r.s. variance. Hence the actual standard error is up to $\sqrt{1.8}=1.34$ times as large as that of a simple random sample of the same number (2000) of elements. If the researcher, ignoring the correct formula, used s.r.s. formulas, he would be using instead of the correct interval of 1.96, actual intervals as small as $1.96/1.34=1.46$. This would result in his statements being incorrect 14 per cent of the time instead of the 5 per cent level he wanted to use.

When pairs of subclasses are compared, and the variances are computed for the differences of the two means, the ratio of $\frac{\text{True Var.}}{\text{s.r.s. Var.}}$ is similar to those found for single means. Here too, the actual variance may be as much as 1.8 times the value that s.r.s. formulas would yield. In these comparisons, however, we find ratios as low as 0.8; at times the actual variance is a little less than s.r.s. formulas would indicate. At present we lack good theoretical justification for this result.

In Item 2 the subject matter is quite different from that in 1, and there are also changes in the numbers of different kinds of sampling units. (About 8000 dwellings had to be included to find 2900 respondents; the other 5100 contained no women of childbear-

TABLE 2. EFFECTS OF COMPLEXITY OF DESIGN ON CONFIDENCE INTERVALS *

Items	Nature of the Characteristics and of the Population	Numbers of Sampling Units	Type of Estimates	No. of Tests Conducted	Ratio True var. s.r.s. Var.	Confidence Levels
1	Attitudes and expectations on consumer items	2000 respondents in 2000 families, in 1000 segments, in 150 places, in 34 psu's †	Proportions based on 2000 and on subclasses of 150-1000	144	1 to 1.8	.05 to .14
	U. S. family heads and wives		Comparisons for pairs of subclasses	48	0.8 to 1.8	.03 to .14
2	Numbers of actual and expected children; family planning behavior	2900 women from 2900 dwellings, in 2000 segments, in 250 places, in 66 psu's †	Means and proportions based on 2700 and on subclasses of 400-1800	48	1 to 2.5	.05 to .21
	U. S. women of child-bearing age		Comparisons of the above for pairs of subclasses	24	0.7 to 2.5	.02 to .21
3	Travel behavior; frequencies of trips and choice of transportation	8500 adults in 4100 dwellings, in 2000 segments, in 250 places, in 66 psu's †	Proportions based on 8500	10	2 to 6	.16 to .42
	U. S. adults		Proportions based on subclasses of 300-3000	60	1 to 6	.05 to .42
			Comparisons of the above for pairs of subclasses	30	0.8 to 5	.03 to .38
4	Perceptions of supervisory practices	685 workers in 59 work sections	Proportions based on groups of 10 to 25 sections	15	1 to 5	.05 to .38
	Workers in public utility firm					
5	Perceptions of production norms and attitudes of satisfaction	1458 workers in 57 work sections	Proportions based on entire population and on groups of sections	20	1 to 4	.05 to .33
	Production workers in large manufacturing company					

* From Sample Surveys conducted by the Survey Research Center.

† "Psu's" are "primary sampling units," the first and largest units selected in the multi-stage sample. Here they were counties or groups of counties. The "places" were cities, towns or rural areas.

ing age, 18-40, as defined for the survey.) The effect of the complexities of the sample is similar to that found for Item 1, but somewhat larger. Again, the variances of differences show effects similar to the variances of single estimates.

Item 3 is an example of the very large effects that high homogeneity can produce. For some items the travel behavior of the adults of the same household is very similar. Thus the presence of an average of 2.1 adults

per household will have strong clustering effects—as compared with a similar number of adults selected independently. When 4100 respondents (one per household) were analyzed separately, the effects of the sample design appeared to be not much greater than for Item 2. (The information about the "other" adults in the household was not "worth" statistically and relatively very much per individual adult; however, the cost of this information per adult was very low

too. Thus the information per dollar was still worthwhile.) Note that the comparisons of two means can be subject to very large effects too.

In Items 4 and 5 we examine the effects of clustering in two situations involving work groups. There are strong effects in Item 4 in spite of the fact that the clusters averaged only 11 or 12; the large homogeneity of attitudes within work sections (ρ going up to 0.4) caused large effects. If the researcher had used s.r.s. formulas he might have been wrong 38 per cent of the time instead of 5 per cent.

For most of the national surveys of the SRC the actual variances are from 1 to 2 times as great as the s.r.s. variances. This means that the "effective size" of a sample of 2,000 elements is equivalent to 1,000 s.r.s. elements. Of course, the sample is designed in the expectation that the savings in cost per element will be greater than the loss in information. Effects as large as those of Item 3 are rare in good surveys, because if one can anticipate the large effects they can usually be avoided in good design. However, Marks found a ratio of 11 in his pioneer investigations of this problem.⁴ The study he criticized involved intelligence tests using school classes as sampling units. Using s.r.s. formulas in that case distorted confidence levels from .01 to .50! Furthermore, we found effects of similar magnitudes for the confidence intervals of the *differences* of pairs of means. From these we may expect that *analytical statistics* in general can be subject to effects of this kind.

The distribution of the $\frac{\text{True Var.}}{\text{s.r.s. Var.}}$ -ratios are not uniform between their limits of 1 and 2. The greatest concentration is near the lower end, perhaps near 1.2. Then there are fewer and fewer as one gets near 2. Furthermore, the computed ratios are subject to considerable sampling errors; our "true variances" are based usually on 66 primary sampling units. Because of this, in setting up the above limits, we excluded an occasional stray value that fell well beyond the bounds that included most computations.

⁴ Eli S. Marks, "Sampling in the Revision of the Stanford-Binet Scale," *Psychological Bulletin*, 44 (September, 1947), pp. 413-434.

THE PRESENT SITUATION

In attempting to state in broad and general terms the present situation on the existence of valid statistics for data from complex samples, I shall assume that the sample has come from a good probability design, and also that it is either self-weighting or that the proper weights have been introduced to counteract unequal probabilities of selection.

1. For estimating a population mean, proportion, median, or total, the corresponding sample value may serve as a good estimator. Here the s.r.s. assumption does not lead to large errors, and the ordinary sample values are usually unbiased estimators or have only negligible bias. (It is understood that the sample total is multiplied by some "raising factor" to estimate the population total; that a proportion is but one form of the mean; and that frequently the sample mean is really a ratio estimator and calls for some caution.)

2. The variances of the above statistics (mean, proportion, total, and median) can be estimated to a good approximation for properly designed samples. The formulas for the variances differ from one sample design to another; generally they are quite different from s.r.s. formulas. The substitution of s.r.s. formulas (such as σ^2/n or pq/n) in place of the appropriate variance estimators can lead to large mistakes; for clustered samples it typically leads to underestimation that may be serious (as shown above). The literature of the social sciences shows many of these mistakes.

For the difference of two means or totals the variance estimators are but extensions of the foregoing; thus we may construct confidence intervals and tests of hypotheses for those differences. Furthermore, the above estimators of means and totals, and of their variances, are available not only for the entire population covered by the sample, but also for its subclasses; and the difference of two subclasses can also be tested. With that, however, we exhaust the list of statistics available for data from complex sample designs.⁵

⁵ The several texts on sampling (see footnote 1) contain valuable information on the estimation of means, proportions, and totals. They also discuss at length the variances of those statistics; these are rather complicated for some complex designs.

3. In general, formulas are lacking for the analytical treatment of data arising from complex sample designs.⁶ There is a great variety of statistical tools now available for s.r.s. selection: correlation and regression analysis, discriminant analysis, analysis of variance for differences among several (3 or more) means, tests of contingency tables, nonparametric tests, and so forth. All the formulas for these tests involve the assumption of n independent selections, that is, s.r.s. selection. However, they are not valid for data from complex sample designs.

For some statistics the erroneous use of s.r.s. formulas leads to only small errors. For example, the sample correlation coefficient is usually a good estimate of the population correlation coefficient. But the s.r.s. formula (something like $1/\sqrt{n-k-1}$) for the standard error of that coefficient can be a very poor estimate; for clustered samples it may be a serious underestimate. Thus the use of s.r.s. formulas on data from complex sample can lead to gross mistakes in probability statements. I fear that such mistakes are frequently made.⁷

For an attempt to provide a simplified and unified approach for computing variances of means and of their differences, applicable to most practical designs, see Leslie Kish and Irene Hess, "On Variances of Ratios and Their Differences in Multi-Stage Samples," *The Journal of the American Statistical Association*, in press.

For the variances of medians see Hansen, Hurwitz and Madow, *op. cit.*, pp. 448-449. For the treatment of differences of subclasses from a stratified sample of elements see Yates, *op. cit.*, Ch. 9.

⁶ "The required sampling assumptions are, in general, extremely restrictive; the majority of tests of significance still relate only to extremely simple Bernoullian samples and the sampling procedures now in general use ('cluster' sampling, two-stage sampling, etc.) remain, in the present state of theory, outside the scope of these tests." [P. Thionet, "Mathematical Methods in Public Opinion Polls," *International Social Science Bulletin*, 6 (December, 1954), p. 652.]

⁷ The situation of the correlation coefficient is somewhat similar to that of the mean. The sample value is often a good estimator of the population value. But the sampling distribution of the estimator can be subject to much larger variance than s.r.s. selection, because of the correlation among the units selected from the same cluster. Then the use of s.r.s. variance formulas results in gross underestimation of the true variance. For these opinions I assume responsibility, but in discussions with fellow statisticians I found support and no contradiction.

Let us recapitulate and assume agreement on three things: (1) That using simple random sampling formulas on data obtained from complex clustered sample designs may lead to large mistakes and should be avoided. (2) That for properly designed samples good approximations are available for estimators of population means, proportions, totals, and medians, and also for estimating the variances of those estimators. Furthermore, for the difference of two of these estimators the variances, too, can be well approximated. These things can be done for the entire sample and for its sub-classes. The computations of these estimates are only moderately cumbersome, and are now generally available. (3) Present statistical theory fails to provide confidence intervals and tests of hypotheses for analytical statistics if the data arise from complex samples.

What are the alternatives facing the research scientist who wants to construct confidence intervals and tests of hypotheses for analytical statistics? Below are seven procedures that are appropriate in different circumstances. The first three amount to ways of avoiding the main problem through simplified designs. The last four are attempts at obtaining useful approximations for complex samples. The presentation is organized around the problem of providing the estimators of variances for the construction of valid confidence intervals. This problem can be translated into methods for testing hypotheses.

WAYS OF AVOIDING THE PROBLEM

Here follow three ways, one of which may help the researcher in a specific situation to avoid the difficult problems of constructing valid confidence intervals on data obtained from a complex sample design. I refrain from including the alternative of postponing the computations until the proper formulas are derived by mathematical statisticians. Also I object strongly to ignoring the problem by making the hypothesis and the "universe" fit the sample. In this inverted procedure the statistical inference is to some unspecified universe, or to a vague and artificially contrived one. The resulting confusion often hides unsuspected nonsense. It is common to find the researcher ignoring the nature and the very existence of the "universe" that

must lie behind every statement about "significant differences."

1. *The researcher may take a simple random sample of elements.* Under this heading I would include sample designs which do not depart importantly from s.r.s., e.g. proportionate stratified random samples of elements, or systematic samples of elements. This procedure can be followed with little or no sacrifice of efficiency when the listing and the travel costs are not prohibitive. The researcher can afford moderate increases in the costs of the selection and of the measurement (the "field work") if the s.r.s. design brings compensations in easy computations of variances and of analytical statistics.

The complexities of cluster samples are sometimes introduced into sample design without sufficient justification. Here are three examples of situations where a return to simpler methods may be advisable: (a) A simple sample of elements may be best for mailed questionnaires when good mailing lists are available. (b) For dwellings of a city, instead of an area sample clustered by blocks, one might well use a systematic selection of individual lines from the city directory supplemented by an area sample of the small proportion missed by the directory.⁸ (c) In sampling the students of a university, one can often take students rather than classes as the sampling unit.

2. *The selection procedures may be designed specifically to yield simple estimates of the variance or other needed statistics.* This idea can be illustrated with three examples. (a) One approach consists of weaving into the entire design a small number of independent replications of it. Each of these replications then gives an independent estimate of the research objectives, and their comparisons yield estimates of the variance of the entire sample.⁹ (b) Relatively simple

methods are available if the sample consists of *independently* selected clusters that are equal in size, or roughly equal (see below). The sample may sometimes be designed accordingly. If the natural clusters vary greatly in size, one may create subsamples of equal size after selecting the clusters with probabilities proportional to size.¹⁰ (c) Another interesting approach is being investigated by Nathan Keyfitz of the Dominion Bureau of Statistics of Canada, and William Hurwitz and Joseph Steinberg at the U. S. Census Bureau. This procedure consists in exploiting the considerable simplification and standardization that can be obtained by taking exactly two selections from each stratum. The variance is built up simply from units like $(y_{n1} - y_{n2})^2$ where y_{n1} and y_{n2} are sample values of the two selections from the h -th stratum. For situations of experimental design Keyfitz shows somewhat analogous advantages for the 2^n factorial design.¹¹

These are three examples of the general method of designing the sample with the object of obtaining the desired complicated statistics reliably and simply. To obtain these results, one needs to use foresight and care and, perhaps even to sacrifice some of the theoretically available statistical efficiency.

3. *The researcher may refrain from constructing confidence intervals and from making probability statements.* He thus allows the inference from sample to population value to remain indefinite. In these cases reliance on the research result comes not through statistical inference but through the successful repetition of similar results in separate investigations. In a sense, one may consider the separate investigations as if they were so many different sampling units. This approach may be quite acceptable in some situations, especially if the conditions are forced on the researcher, as is often the case in the social sciences, in geology, in astron-

⁸ Theodore D. Woolsey, "Sampling Methods for a Small Household Survey," *Public Health Monograph* No. 40, Issued concurrently with *Public Health Reports*, 71, (August, 1956).

⁹ For example, 10 subsamples may be drawn from the same population, independently and using the same probability design. Then if the mean of one of the ten subsamples is denoted as \bar{y}_1 , and the

mean of the entire sample is $\bar{y} = \frac{1}{10} \sum \bar{y}_i$, then

simply variance of $\bar{y} = \frac{1}{10} \frac{1}{9} \sum (\bar{y}_i - \bar{y})^2$

See Deming, *op. cit.*, pp. 352-355; also W. Edwards Deming, "On Simplifications of Sampling Design Through Replication with Equal Probabilities and Without Stages," *Journal of the American Statistical Association*, 51 (March, 1956), pp. 22-53.

¹⁰ Kish, *op. cit.*, pp. 226-230.

¹¹ Nathan Keyfitz, "A Factorial Arrangement of Comparisons of Family Size," *American Journal of Sociology*, 58 (March, 1953), pp. 470-480. See also Model I in Kish and Hess, *op. cit.*; and Deming, *op. cit.*, pp. 34-39.

omy, in biology, and so forth. Perhaps most scientific advance has been made in this way.

In some of these situations the researcher may compute from s.r.s. formulas a lower limit on the size of the confidence interval. This is to serve as a check on the reader's imagination and as a precautionary measure against overinterpreting the data. But then the reader should be warned that these are not true confidence intervals but only likely lower limits. In terms of testing a null hypothesis: If the s.r.s. computations fail to reject the null hypothesis, it remains unrejected; but the reverse does not hold.

APPROXIMATIONS FOR ANALYTICAL STATISTICS

We trust that gradually mathematical statisticians will provide an increasing number of specific formulas for many useful analytical statistics and for different kinds of complex designs, but the researcher who has interesting data from a complex sample does not want to wait for that millennium. He wants to use some of the powerful tools of analytical statistics now. Furthermore, if he is conscious of the mistakes that may result from using s.r.s. formulas, he wants to avoid them. Some alternative approaches are suggested here, in the hope that they may be helpful. These approaches have various kinds of weaknesses that are more or less serious in different situations; and the mathematical foundations of some are not as secure as we wish. Nevertheless, they are frequently preferable to the s.r.s. formulas now in wide use.

1. When an exact formula is not available, the researcher should look (or ask a statistician) for a good approximation. One may construct from the available statistics some model that will fit the situation fairly well; perhaps much better than the s.r.s. model. In choosing a model, judgment must be based on statistical theory, on relevant statistical experience, and on the substantive knowledge of the nature of the data under treatment.

Consider a sample consisting of clusters that have been drawn with independent random choices: classes have been drawn at random, and these become clusters of the students who form the elements of the population under study. Sometimes satisfactory

statistical treatment results from treating the cluster means as the units in the statistical analysis. This treatment *may* permit the use of the standard s.r.s. formulas on these units.

However, there are obstacles to this approach, and these may illustrate the needed sources of good judgment. First, we cannot consider the different cluster means of the analysis as independent if they are made up of elements that originate in common sampling units.¹² Second, gross inequalities in the sizes of the clusters may call for the use of weights for the cluster means.¹³ Third, the use of the cluster means may be improper on substantive grounds. For example, correlations taken among cluster means has a different meaning than correlation among the elements.¹⁴

2. It is sometimes useful to translate the problem into another problem for which the statistical solution is available. Sometimes merely reformulating the statistics will provide a solution. For example, the general formulas for chi-square tests of contingency tables are lacking for data from complex samples. But a 2×2 chi-square test can usually be translated into a test of the hypothesis that there is zero difference between the proportions possessing a certain characteristic in two populations. This difference of two proportions can be tested because the formula of its variance is known.

To clarify this illustration examine a 2×2 table on which a chi-square test of independence is to be conducted:

¹² This point may be clarified through the example of a simple analysis of variance test among the means of k classes. If each of the k classes consists of *entire* clusters then the clustering does not introduce correlation among the means. But if the class lines cut across the cluster lines, the correlation due to clustering interferes with the contrasts among the cluster means. The difficult statistical problems of dealing with the correlations among the units of analysis, as these problems arise in complex sample designs, still await solution.

¹³ Paul Meier, "Variance of a Weighted Mean," *Biometrics*, 9 (March, 1953), pp. 59-73; William G. Cochran and Sarah P. Carroll, "A Sampling Investigation of the Efficiency of Weighting Inversely as the Estimated Variance," *Biometrics*, 9 (December, 1953), pp. 447-459.

¹⁴ W. S. Robinson, "Ecological Correlations and the Behavior of Individuals," *American Sociological Review*, 15 (June, 1950), pp. 351-357.

	1	2	Totals
a	n_{a1}	n_{a2}	n_a
b	n_{b1}	n_{b2}	n_b
Totals	n_1	n_2	n

In the usual situation one wants to test the null hypothesis of no difference in the proportions of a's occurring among the individuals of samples 1 and 2, respectively. Instead of the common chi-square test we may conduct a *t* test on the difference between $p_1 = n_{a1}/n_1$ and $p_2 = n_{a2}/n_2$. If the samples 1 and 2 were selected independently by s.r.s., the variance of this difference would be roughly $p(1-p)(\frac{1}{n_1} + \frac{1}{n_2})$, where $p = n_a/n$.

The difference between the chi-square and the *t*-test is of practical importance only for small samples: the "Yates correction" for the former and the factor of $(n_1+n_2)/(n_1+n_2-2)$ for the latter. When the sample is not s.r.s. but complex, neither of the above two tests is valid; however, for the difference of the two proportions, valid estimates of the variance may be computed from appropriate formulas (see footnote 5).

In other situations a different test is called for because the rows and columns represent merely two measurements on the same sample of n . For example, in a "test-retest" situation the *a*'s and *b*'s may stand for the "yes" and "no" answers, respectively, *before* the experiment; and the 1's and 2's for the "yes" and "no" answers *after* the experiment. The null hypothesis—that the proportion of "yes" answers after the experiment is the same as before it—may be tested with a modification of the chi-square test based on the assumption of s.r.s.¹⁵ This test, however, may be made also as a *t*-test of no difference between the two proportions $p_{a2} = n_{a2}/n$ and $p_{b1} = n_{b1}/n$. If the n elements came from an s.r.s. selection the variance of the difference ($p_{a2} - p_{b1}$) would be approximately $(p_{a2} + p_{b1})/n$. For a complex sample, again, we can

compute an appropriate variance for the difference of the two proportions.

Another example arises from the problem of confidence intervals for medians and other quantiles. This has been solved by translating the problem into one of confidence intervals for proportions.¹⁶ At the Survey Research Center we are working on an analogous confidence interval for the difference of two medians based on the difference of two proportions.

When the researcher cannot find solutions to problems by merely reformulating the statistics, he may attempt another approach by recasting the substance of his question in an altogether different mold. This approach is less desirable since statistical analysis should follow the researcher's interest rather than lead it. At times, however, this method may succeed where others fail. In particular, the difference of two means may serve in the most diverse places as an analytical tool. We may place high hopes on further extensions of the "multiple comparison tests," designed by Tukey and Scheffé, especially after its adaptation to complex samples.¹⁷

3. From computations on available statistics inferences may be made by analogy to other statistics for which statistics are not available. Take as an example the case where one wants to test the null hypothesis that k (greater than 2) means are samples from the same population of means. First, the researcher can compute the variance of the difference of two of these means; and he does this for several pairs, perhaps for all pairs. Second, he finds the ratio of these variances to what he would expect with s.r.s. Third, he infers that the comparison of the several means would show the same kind of increase over s.r.s. Sometimes tests will disclose that the s.r.s. assumption is fairly satisfactory, and the researcher can base his tests on the standard formulas with some confidence.

In this kind of situation, one often com-

¹⁵ Hansen, Hurwitz and Madow, *op. cit.*, pp. 448-449.

¹⁶ Henry Scheffé, "An Analysis of Variance for Paired Comparisons," *Journal of the American Statistical Association*, 47 (September, 1952), pp. 381-400.

¹⁵ Quinn McNemar, *Psychological Statistics*, New York: Wiley and Sons, 1949, pp. 200-207.

putes a whole series of variances for different items and then reduces them to some standard form so that they may be compared under assumptions that should be reasonable on the bases both of their logical content (their mathematical derivations) and of empirical evidence obtained from similar data. Probably the most popular standard form for comparison among sampling statisticians is the one mentioned above: noting the ratio of the increase of the variance over the s.r.s. formula. Sometimes this can be expressed conveniently in terms of the measure of homogeneity, the coefficient of intraclass correlation.¹⁸ Sometimes some other standards of comparison may be useful; one is the coefficient of variation or its square, the "variance."

There are some important problems to be undertaken here. What is an analogous test? What criteria should one use for averaging a set of these comparisons? One may use some central value, but some prefer to use a so-called "safe" confidence interval; that is, something close to the topmost value of a series of computed ratios to s.r.s. Recently we have used two limits in our sampling error tables. These two limits are near the lower and upper limits of a set of ratios to s.r.s. The lower limit is generally that of s.r.s.; for proportions this is $\sqrt{pq/n}$. The upper limit quite frequently approaches $\sqrt{2pq/n}$ (but it tends to be lower for smaller n , the size of the subsample on which it is based). Within the two limits, tests of hypotheses are conducted as follows. If the lower limit is not exceeded, do not reject the null hypothesis. If the upper limit is exceeded, reject the null hypothesis. If the statistic falls between the lower and upper limits, suspend judgment and try to conduct a more exact test.

4. A general method now being investigated, promises to yield good approximations for the variances of many statistics. Say that we need the variance for an estimate u . We select half of the entire sample in a manner that reproduces the full complexity of the sample. For many designs this means selecting at random half of the "primary sampling

units" from each of the strata comprising the entire sample. Then we compute the same estimate as above, but based on the half sample; call this estimate $u_{\frac{1}{2}}$. It turns out the $(u_{\frac{1}{2}} - u)^2$ is an unbiased estimate of the variance of u . Since it is subject to large sampling error, one may make the split repeatedly to obtain several estimates, and then use a central value among them as the estimate of the variance of u .

In this way one may obtain estimates of the confidence intervals for which specific formulas are not now available. At the U. S. Census Bureau this method has been tried out on some complex estimates of means and totals for the Current Population Surveys. At the Survey Research Center we are now introducing it for computing standard errors for regression coefficients and other statistics.

SUMMARY

Standard statistical literature has been developed in terms of the assumptions of *independent* observations obtained by simple random sampling. However, most social research is actually carried out by means of complex sample designs because s.r.s. is uneconomical and impractical. In the social sciences the use of s.r.s. formulas on data obtained from complex samples frequently results in serious mistakes. Among the various kinds of departures from the assumptions of s.r.s. *clustering* probably causes the largest and most frequent errors.

For both surveys and experiments the researcher is often compelled to select his individual observations in clusters in which the individuals tend to be more or less homogeneous. This homogeneity violates the assumption of independence inherent in most statistical formulas and has particularly serious consequences on the probability levels of confidence intervals and of tests of hypotheses. Many researchers who wish to use a 5 per cent level of confidence actually use levels ranging from 10–50 per cent! Empirical evidence is presented of the magnitude of these errors in different situations.

Several fine recent books deal with the problems of complex sampling, and contain proper formulas for estimating means, proportions, totals, and medians, and also the variances of these statistics. For the differ-

¹⁸ John E. Walsh, "Concerning the Effect of Intraclass Correlation on Certain Significance Tests," *Annals of Mathematical Statistics*, 18 (March, 1947), pp. 88–96.

ence of a pair of these estimates valid confidence intervals (and tests of hypotheses) can also be constructed. Beyond these, however, mathematical formulas are lacking for the analytical treatment of data arising from complex samples.

For the research scientist who wants to apply analytical treatment this article presents seven procedures for arriving at an approximate answer. These procedures are offered as preferable alternatives to the present common practice of relying on standard formulas based on the s.r.s. (independence) assumption. Of these alternatives three amount to evasions of the worst problems by designing simpler samples. The other four attempt approximations of analytical statistics for complex samples.

APPENDIX

To demonstrate the magnitude of the problem I examined briefly the 74 articles appearing in 1956 in one of the best journals in social science—the *American Sociological Review*.

Thirty-five were not based on probability samples and contained no probability statements. Of these 24 were not quantitative in content; 11, though quantitative in content, were not based on samples, but on small "chunks," that is, group(s) chosen by judgment, or on entire populations.

Eleven articles were not based on probability samples, but contained probability statements. Of these 2 were based on entire populations; and 9 were based on "chunks" selected by judgment.

The remaining 28 were based on probability samples.

- 3 were s.r.s. selections or close approximations
- 2 were complex selections and the probability statements were computed properly
- 3 were complex selections and probability statements were not made
- 15 were complex selections and the probability statements were computed improperly by s.r.s. formulas
- 5 contained s.r.s. probability statements, but the description of the selection method was not clear.

In summary, of the 28 articles based on probability samples, this discussion was pertinent to somewhere between 18 and 23.

In any journal devoted to quantitative social science it is the rule rather than the exception to find probability statements based on s.r.s. formulas for data obtained from samples that were complex, not s.r.s. We may hope that over the years the situation will improve. Meanwhile the reader may find rewarding exercise in searching his favorite journal for examples.

THE GROWTH OF METROPOLITAN SUBURBS *

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DECENTRALIZATION is clearly one of the most significant movements in the long history of urban communities. In the United States the shift to the suburbs began around a few large cities toward the close of the nineteenth century,¹ but it is no longer confined to a mere handful of super-cities. As time has passed, the outward

thrust of urban population has become characteristic of smaller and smaller places, and there is no indication that the movement is abating.

Fortunately, social scientists have charted the major trends involved in this suburban revolution during recent decades. The careful historical studies by Thompson, Bogue, and Hawley have described the outstanding population shifts from the turn of the century to the most recent census.² They show the

* Revised version of paper read at the annual meeting of the American Sociological Society, September, 1956. The data presented in this report were initially assembled while the writer held a Research Training Fellowship from the Social Science Research Council.

¹ Adna F. Weber, *The Growth of Cities in the Nineteenth Century*, New York: Columbia University Press, 1899.

² Warren S. Thompson, *The Growth of Metropolitan Districts in the United States, 1900-1940*, Washington: Government Printing Office, 1947; Donald J. Bogue, *Population Growth in Standard Metropolitan Areas, 1900-1950*, Washington: Gov-

principal patterns of growth in the major geographic components of the metropolitan area as a whole, and though they concentrate on comparisons *between* the central city and its surrounding ring, they also show patterns of re-distribution *within* these broad areas.

Within the framework provided by these extensive studies of decentralization, two major tasks remain: (1) intensive research filling in the *descriptive* details of the suburban movement, and (2) refinement of a general theory making greater *analytical* sense out of the facts assembled. This report is part of a larger study undertaken in accordance with these broad objectives.

On the descriptive side, this report has a narrow focus. Growth rates for a single decade (1940-1950) are shown for only the larger incorporated places (10,000 and over) lying within the rings of the Standard Metropolitan Areas of the United States.³ On the conceptual side, the paper has broader scope, exploring the relationship between the growth and the functions of these larger suburbs.

The Functions of Urban Areas. Theoretically, urban areas are usually conceived as large and dense concentrations of people engaged in non-agricultural functions. Since they cannot be self-sufficient, they must produce some goods and/or services for exchange, i.e. for consumption by another population. Urban areas differ widely in the major functions that they discharge, and the literature contains a large number of urban typologies in which places are classified according to their "basic" functions.⁴ Internally, however, every urban place must maintain a substantial complement of persons employed in the ancillary activities that pro-

ernment Printing Office, 1953; Amos H. Hawley, *The Changing Shape of Metropolitan America*, Glencoe: Free Press, 1956.

³ Among the 168 Standard Metropolitan Areas defined in the 1950 Census only 66 contain incorporated suburbs of 10,000 or more inhabitants. Among those with more than one officially-designated central city, only the largest is treated as the central city in this study, with all other places classified as suburbs. Exceptions to this procedure were made in three areas (Allentown-Bethlehem, Pa., Minneapolis-St. Paul, Minn., and Springfield-Holyoke, Mass.) where twin central cities were recognized.

⁴ See the references cited in Leo F. Schnore, "The Functions of Metropolitan Suburbs," *American Journal of Sociology*, 61 (March, 1956), p. 453.

vide for the requirements of the inhabitants directly engaged in its major industries. Thus no matter what the principal export it produces, every urban area must allocate a certain portion of its activities to "non-basic" maintenance functions.⁵

Urban Population Growth. Existing urban theory holds that population growth and the major functions of a given area are definitely related. Urban population is assumed to have a functional base, for the very support of the population of a particular place is thought to depend upon its participation in an extensive set of exchange relationships. Population growth requires an increase in this participation, with a corresponding expansion of economic opportunities. Relative differences in the spatial distribution of these opportunities are thought to be the major influences operating to bring about changes in population distribution by determining the size and the direction of migrant streams.⁶

In this theoretical context, a number of writers have recently spoken of a so-called "multiplier principle" to describe the dynamics of urban population growth. Stated in simplified form, the principle is that (1) increasing economic opportunities in "basic" industries cause population growth; (2) population growth, in turn, causes further increases in employment opportunities—this time in the "non-basic" industries—so that (3) still further increments are added to the total population of the area.⁷

On the whole, available theory offers a coherent set of hypotheses regarding urban

⁵ See Otis Dudley Duncan and Albert J. Reiss, Jr., Part IV, "Functional Specialization of Communities," in their *Social Characteristics of Urban and Rural Communities*, 1950, New York: John Wiley, 1956; and John W. Alexander, "The Basic-Nonbasic Concept of Urban Economic Functions," *Economic Geography*, 30 (July, 1954), pp. 246-261.

⁶ See Amos H. Hawley, *Human Ecology*, New York: Ronald Press, 1950. Population can grow by either natural increase or net migration, but the latter component has served as the major source of over-all urban growth in the past. As a result, the literature on urban growth has understandably stressed migration.

⁷ For a detailed discussion and further references see John R. P. Friedmann, *The Spatial Structure of Economic Development in the Tennessee Valley*, Chicago: University of Chicago Program of Education and Research in Planning, Research Paper No. 1, 1955.

population growth. Urban growth is related to urban functions in a remarkably clear-cut fashion. Moreover, empirical studies of large areal units have indicated a high degree of predictive power for this conceptual approach.⁸

Suburbs, however, pose a different population-growth problem. The relationships between growth and function, as stated for urban areas in general, are not immediately evident when suburbs are examined.

The Functions of Suburbs. Suburbs obviously differ widely in the functions that they discharge. In the traditional popular image, the suburb is little more than the dwelling place of people who work in the central city. While it is correct to characterize many suburbs as literally "dormitory towns" and "bedroom cities," a true picture of metropolitan suburbs must not ignore the fact that many of them are far from exclusively residential areas. Some are primarily devoted to the fabrication of manufactured goods. At the present time, for example, both light and heavy industries are the dominant elements in the functioning of some suburbs in every part of the country. Industrial suburbs, in fact, have a long history.⁹ Still other suburbs are basically given over to the provision of specialized services of one kind or another—notably education and recreation—and it is even possible to find suburbs primarily dependent upon extractive industries, such as mining and oil production. In an economic sense, then, the range of specialties found among suburbs approaches that discoverable in other cities.

Despite this wide variation in specific functions, however, a strong case has been made in the literature for the recognition of only two major types of suburb—*industrial* and *residential*. Douglass, an observer of an earlier phase of suburban development, saw these as the two types most apparent in the 'twenties.¹⁰ Moreover, this view was also

adopted by Harris, despite the fact that he developed a detailed six-part suburban typology. "The commonest types of suburb," he wrote in 1943, "are housing or dormitory suburbs and manufacturing or industrial suburbs."¹¹

More generally, suburbs can be identified as *residential* and *employing*. Centers of employment mainly devoted to education, mining, recreation, etc. may be combined with those concentrating in manufacturing. Such places may be called *employing suburbs*, no matter what their specific products may be. They can be contrasted with *residential suburbs*, which employ relatively few people within their own boundaries. The basis for this distinction is whether or not the suburb draws more workers to its confines every day than the number of working people who sleep there every night. These two types of suburb are "attracting" and "dispersing" areas, reflecting the shift between day-time and night-time population.¹²

Suburban Population Growth. Existing theory tends to assume that both types of suburb, like other urban areas, grow primarily in response to an expansion of employment opportunities, particularly in the so-called "basic" industries. On theoretical grounds, however, they would not be expected to grow equally. Since the employing suburb has a net excess of jobs, it offers more economic opportunities, and it should logically exhibit higher rates of growth than

and "Suburbs," in *The Encyclopaedia of the Social Sciences*, New York: Macmillan Company, 1934, 14, pp. 433-435.

¹¹ Chauncy D. Harris, "Suburbs," *American Journal of Sociology*, 49 (July, 1943), p. 6.

¹² This dichotomy is based upon the "employment-residence ratio" computed by Jones for all places of 10,000 or more inhabitants in 1950. It is simply the ratio of (1) the number of people employed in the suburb in (a) manufacturing, (b) retail trade, (c) wholesale trade, and (d) personal, business, and repair services to (2) the number of employed residents of the suburb, and it is computed by the formula: $(1) \div (2) \times 100$. The suburbs identified as employing centers in this study have a ratio of 85 or above, with all suburbs having a lower ratio classified as residential centers. Source: Victor Jones, "Economic Classification of Cities and Metropolitan Areas," in *The Municipal Year Book*, 1953, Chicago: International City Managers' Association, 1953, pp. 49-57. These and the other data from the same source are used here with the kind permission of the publisher.

⁸ See Harry Jerome, *Migration and Business Cycles*, New York: National Bureau of Economic Research, 1926; and Dorothy S. Thomas, *Social and Economic Aspects of Swedish Population Movements, 1750-1933*, New York: Macmillan Company, 1941.

⁹ Graham R. Taylor, *Satellite Cities*, New York and London: D. Appleton and Company, 1950.

¹⁰ Harlan Paul Douglass, *The Suburban Trend*, New York and London: Century Company, 1925,

the residential suburb. The only immediately relevant findings from prior research are to be found in a study by Harris, in which growth rates between 1930 and 1940 were reported for the suburbs in eleven large Metropolitan Districts. "Among individual suburbs of more than 10,000 population," according to Harris, "those classified as residential averaged 11.7 per cent increase in population, compared to 1.7 per cent for those classified as industrial."¹³

In the present study, a similar differential was found for the 1940-1950 decade. The rate for all residential suburbs (31.9 per cent) was almost twice that for all employing suburbs (17.0 per cent). Although this differential is not so large as that reported by Harris, it is in the same direction, i.e. in favor of the residential suburbs.

Moreover, this differential tends to persist when other relevant factors are held constant. The limited number of cases prohibits simultaneous control in a cross-tabular format, but successive controls can be applied.¹⁴

¹³ Harris, *op. cit.*, pp. 10-11.

¹⁴ The definitions of the control variables are as follows: (A) The *regional* delineation used here is the one developed by the U. S. Bureau of the Census. (B-C) *size* classifications are according to the number of inhabitants in 1940, the beginning of the decade under study. (D) Each suburb's *distance* classification is based upon radial measurement between its approximate geographic center and the site of the city hall in the central city. (E) Each suburb is classified according to the *economic base* of the metropolitan area as a whole in 1950. The areas Jones has designated as "Mm" (manufacturing centers) are treated as *manufacturing* areas in this study. Areas classified by Jones as "M" (industrial centers) and "Mr" (diversified centers with manufacturing predominant) are here combined under the heading of *diversified* areas. Jones' types "Rm" (diversified centers with retail trade predominant) and "Rr" (retail trade centers) are here labelled *retail* areas. All of the other types identified by Jones (mining, education, wholesale trade, government, transportation, and resort or retirement centers) are here combined in the residual *other* category. Space limitations preclude a listing of the detailed definitions of each type, which may be found in Jones, *op. cit.* (F) Median *rent levels* for the suburbs in 1950 are classified as follows: *low*-five dollars or more below the median for the entire metropolitan area in which the suburb is located; *average*-within a range of five dollars below to ten dollars above the median for the entire area; *high*-more than ten dollars above the median for the entire area. (Source: Jones,

Horizontal examination of Table 1 shows that residential suburbs tended to grow faster than employing suburbs in all regions (Panel A), in all central city size classes (Panel B), in all suburban size classes (Panel C), in all concentric distance zones (Panel D), and in metropolitan areas of every major type of economic activity (Panel E).

Only one exception appears in Panel F, where the prevailing differential is reversed in one of the three rental classes, i.e. among high-rent suburbs. The only major reversal is found in Panel G, where suburbs are classified according to their dates of incorporation. The differential in favor of residential suburbs is seen to characterize only the older suburbs, i.e. those incorporated before 1900.¹⁵

These data are difficult to interpret in terms of economic opportunities. On first examination, the growth rates of *employing* suburbs in the past two decades might appear to support the theory. The very low average rate of growth between 1930 and 1940 can be viewed as nothing more than the result of the severe limitations on manufacturing activity that occurred during this depression decade. In turn, the resumption of substantial industrial activity between 1940 and 1950 might seem to account for the ten-fold increase in growth rates in this type of suburb.

By definition, the employing suburb does offer economic opportunities, since it provides jobs for more than the number of local residents who are employed. Still, the subordinate status of many employing suburbs prevents them from enjoying full autonomy with respect to growth. For example, employing suburbs that provide goods and services primarily for the central city are necessarily sensitive to events occurring there, such as changes in the number of inhabitants of the metropolis, or changes in its income level. At best, then, the theory offers an incomplete explanation of growth in employing suburbs.

ibid.) (G) the *age* of the suburb is approximated by its date of incorporation.

¹⁵ A vertical examination of Table 1 suggests that growth rates are related to six of the seven variables taken separately, for both types of suburb. These relationships merely serve here as *prima facie* evidence of the need for controlling these variables in the examination of growth differentials according to functional type.

TABLE 1. GROWTH RATES IN METROPOLITAN SUBURBS OF 10,000 OR MORE INHABITANTS, BY FUNCTIONAL TYPE AND OTHER CHARACTERISTICS

Selected Characteristics of Metropolitan Suburbs	Per Cent Increase in Population, 1940-50			Number of Suburbs		
	Residential	Employing	All Suburbs	Residential	Employing	All Suburbs
A. Regional location						
Northeast	13.3	6.1	8.1	65	110	175
North Central	30.0	17.1	22.8	65	57	122
West	63.6	47.1	53.1	37	43	80
South	77.4	47.4	60.4	20	19	39
B. Central city size						
500,000 or more	27.8	12.4	18.2	136	142	278
100,000-500,000	36.1	13.8	21.6	32	40	72
Less than 100,000	79.5	36.9	42.9	19	47	66
C. Suburban size						
50,000 or more	15.1	10.0	11.5	17	31	48
25,000-50,000	18.8	14.9	15.8	18	55	73
10,000-25,000	30.9	19.1	24.4	90	102	192
Less than 10,000	104.1	92.6	99.3	62	41	103
D. Distance from central city						
0-10 miles	27.2	16.4	20.8	112	92	204
10-20 miles	40.8	18.2	25.3	61	84	145
20 miles or more	29.4	15.9	18.1	14	53	67
E. Metropolitan area economic base						
Manufacturing	23.6	12.2	16.1	79	105	184
Diversified	33.0	19.3	23.9	89	98	187
Retail	68.9	23.4	39.2	17	23	40
Other	412.7	64.8	103.4	2	3	5
F. Suburban rent level						
Low	31.7	12.8	15.9	7	26	33
Average	29.0	15.1	18.8	91	173	264
High	36.3	44.1	38.4	89	30	119
G. Age of suburb						
More than 50 years	21.8	12.2	15.0	102	178	280
40-50 years	33.1	36.2	34.6	35	31	66
30-40 years	51.8	66.2	57.5	25	12	37
Less than 30 years	116.6	168.5	126.6	25	8	33
All suburbs	31.9	17.0	22.1	187	229	416

However, if the existing theory of urban growth meets resistance in the case of employing suburbs, *residential* suburbs are even less amenable to it. The higher average rates of growth in these suburbs during both of the last two decades can hardly be attributed to an expansion of economic opportunities within their own boundaries. It must be remembered that the residential suburb itself employs relatively few people within its own confines, and these chiefly in such "non-basic" activities as retail trade and services. As indicated above, increases in these "non-basic" employment opportunities are commonly treated, within the very framework

of the theory, as themselves dependent upon local population growth.

More important, residential suburbs are intrinsically dependent upon other areas. With respect to population growth, almost nothing than can occur within the boundaries of such a suburb is potentially as significant as changes that may occur in the other areas that employ its residents. In the light of these considerations, existing theory falls far short of explaining over-all suburban growth, and it fails entirely to account for growth differentials between types of suburb.

Limitations of Existing Theory. Why should the available theory offer so much in

explaining growth differentials between large areas (e.g. regions) and fail to explain growth differentials between suburbs? The first major difficulty encountered by the theory in the case of suburbs stems from the fact that these places are only parts of a larger functional entity, the metropolitan community. The theory of economic opportunities contains a hidden assumption with respect to functional self-containment. As a result, the theory can be valid only for areal units that possess a rather high degree of self-sufficiency. This is apparently the reason for the theory's great explanatory utility in the studies of whole regions and even nations.

Moreover, the theory does not take full account of the increasing flexibility of local transportation in recent decades. Innovations in transportation and communication have permitted community functions to be diffused over a wider territory without loss of contact, and this spatial spread involves an increasing flow of persons between the sites of their various activities. The significance of commuting for population growth is that it may supplant migration as an adjustment on the part of the local labor force to shifting or declining opportunities for employment.¹⁶ As a consequence, residential areas may continue to grow as long as employment opportunities continue to expand anywhere within an extremely broad commuting radius.

It can hardly be said that transportation improvements have been ignored in urban theory. They have received some attention in most discussions of decentralization to be found in the literature. These innovations, however, have been conceived as little more than permissive factors. They are generally said to have set the conditions under which suburban growth could occur. Other factors are undoubtedly at work, but these other factors are increasingly sought in a rather narrow sphere.

Most analysts who have devoted attention to the subject of suburbanization have apparently assumed that the causes of the centrifugal shift are ultimately to be found in the motives of the individuals involved in the movement. Even the human ecologists, who are often thought to be "anti-psycholog-

ical," are prone to shift to motivational explanations when it comes to suburbanization. In keeping with a general tendency within our discipline, social psychology is coming to supplant the sociological approach in this problem area.

Thus while stressing the key role of economic opportunities for larger units, such as regions, most writers turn to an analysis of the motives of individual migrants in dealing with decentralization within local areas. Such a procedure rests upon the tacit assumption that explanations of growth in areas of different size must somehow require entirely different approaches, involving different units of analysis and a different range of variables.

It might appear that the evidence presented here offers additional support for such a procedure. After all, the theory—as it has been stated for urban areas in general—clearly fails to account for the observed growth differential in favor of residential suburbs. These results might seem to call for an immediate shift to a social-psychological approach. Indeed, the ultimate explanation may very well lie in the attitudes, motives, values, etc. of the individuals involved in this movement. However, there is a theoretical alternative at least worthy of exploration. The admitted weaknesses of the existing theory might better be resolved not by its abandonment but by modification of certain basic concepts.

A PROPOSED MODIFICATION OF THE THEORY

The first step in this direction is to state the conditions under which factors other than narrowly defined economic opportunities might be important in the determination of growth differentials. Rather than to abandon the concept of opportunities, a logical alternative is to expand it to subsume more than employment.

One consideration so fundamental that it is easily overlooked is that the population of any area must have housing and the related amenities of life. Our attention is drawn to the housing factor for a very simple reason: dwelling units must exist in a given area before people can be enumerated there on a *de jure* basis, and before population growth can be registered in U. S. census statistics.

If the concept of opportunities is broad-

¹⁶ See Hawley, *Human Ecology*, op. cit.; and Kate K. Liepmann, *The Journey to Work*, New York: Oxford University Press, 1944.

ened to include opportunities for housing, we can propose the following general hypothesis. Within local areas of the metropolitan community, differential population growth is primarily determined by the distribution of differential housing opportunities, and especially by the different patterns of building activity evidenced in various sub-areas.¹⁷ Within this theoretical context, in which emphasis is placed upon *housing opportunities*, it is possible to develop specific sub-hypotheses regarding growth differentials between types of suburb. (1) Residential suburbs are growing rapidly because they are becoming even more residential in character, by means of large increments in housing construction. (2) At the same time, employing suburbs are growing less rapidly because they are becoming more exclusively devoted to industry and other employment-providing activities. In these employing places, the net effect of this increased specialization in production and employment is (a) to drive out pre-existent residential uses of land, and (b) to discourage new construction of housing.

Indirect evidence in support of these hypotheses can be adduced by considering central cities themselves. The typical central city is obviously undergoing a conversion to a different range of land uses. Formerly the principal place of residence of its own labor force, it is now being turned over to other urban uses—commerce, industry, and transportation. The concomitant of this trend in land-use conversion is the outward shift of population that is reflected in the growth differentials in favor of the metropolitan ring.¹⁸

The established employing suburbs appear to be undergoing the very same process of land-use conversion. Thus the oldest employing suburbs themselves are evidently decentralizing at a fairly rapid pace, with only their rates of natural increase preventing most of them from suffering absolute

losses in population. In fact, the older employing suburbs are probably losing large numbers directly to the residential suburbs via migration.¹⁹

The Role of Housing. The hypotheses stated above assert that differential housing opportunities are the major determinants of growth differentials between sub-areas of the metropolitan community. In the interest of complete analysis, we must go on to ask *why* new housing construction is occurring *where* it is, since we are dealing with growth in different types of area.

Here again a social-psychological approach might seem to be in order, since it is obviously individuals who occupy dwellings and who change residences. But it should be pointed out that relatively few people in a metropolitan area choose a site and then have a house "built to order." On the contrary, the typical purchase is "ready-made" in a large development. Very few urbanite home owners have a hand in the selection of sites where residential construction will take place, and control over location is even more limited in the case of renters.

In a complex economy, the choices of building sites are made by contractors, real estate operators, and others, notably those involved in the initial capitalization of new developments. Families and individuals are not decisive agents in the process of land-use conversion.²⁰ When asked about their residential movements, the "reasons" they offer to an interviewer may be misleading in the extreme.

Like other "choices" the housing decisions of individuals are strictly limited by objective conditions. Among these conditions, which include the timing and placing of available housing facilities, the *location* of dwelling units will continue to receive emphasis here, since we are dealing with growth differentials

¹⁷ Space limitations preclude the discussion of fertility and mortality differentials between types of suburb that may contribute to the observed growth differentials.

¹⁸ See William H. Form, "The Place of Social Structure in the Determination of Land Use," *Social Forces*, 32 (May, 1954), pp. 317-323. In addition, the historical context must be kept in mind. Available housing data indicate that the typical metropolitan area comprised a seller's market between 1940 and 1950. In other words, aggregate demand was usually well in excess of the supply of housing available.

¹⁷ Housing opportunities, of course, represented the operational definition used in Samuel Stouffer's well-known study, "Intervening Opportunities: A Theory Relating Mobility and Distance," *American Sociological Review*, 5 (December, 1940), pp. 845-857.

¹⁸ These statements are documented in Dorothy K. Newman, "Metropolitan Area Structure and Growth as Shown by Building-Permit Statistics," *Business Topics*, 4 (November, 1956), pp. 1-7.

between types of area. Once again it will be instructive to consider the case of the metropolis itself.²¹

The existing literature contains a number of hypotheses that attempt to account for the rapid expansion of residential construction in the metropolitan ring as a whole, and the limited building activity within the central city. First, high rates of construction at the periphery may simply be a consequence of the exhaustion of space for residential development in the central city. There is undoubtedly some merit to this view, but sheer space alone is hardly decisive, since the percentage of vacant land in most large cities is strikingly high.²² However, a large proportion of this area is unsuitable for residential development for reasons of cost, location, or prohibitive zoning laws. Among these limitations, it seems probable that the high cost of land in the central city is particularly significant, acting as a deterrent to residential use.

Less frequently mentioned, but a matter of increasing importance, is the fact that great economies are made possible by the mass production of housing. While vacant land within the city itself is considerable in the aggregate, it tends to be split into a multitude of small parcels. The increasing use of mass production methods in constructing dozens or even hundreds of dwelling units at the same time and in the same contiguous area permits large savings to be made by the builders, with mass buying of materials adding still further savings.²³

However, purely "spatial" or "economic" considerations are not the only factors op-

²¹ It may be objected that this presentation ignores the decision-making process among contractors and others who actually initiate housing construction. It is true that discussion of the social-psychological aspect of residential mobility and population re-distribution is deliberately avoided in this paper. Those who are interested in motivational aspects of decentralization might do well to explore the motives of contractors, real estate operators, and financiers, rather than concern themselves exclusively with those of individual householders.

²² Harland Bartholomew, *Land Uses in American Cities*, Cambridge: Harvard University Press, 1955.

²³ The importance of large tracts of vacant and cheap land is itself suggested by the fact that the very highest rates of growth in the metropolitan area between 1940 and 1950 were registered in unincorporated rural territory.

erating to determine the sites of housing construction. There is also an important sociological factor. It appears that the locations of the dominant units in the community set the broad pattern of land use for smaller and less powerful units, such as households. In one sense, this is nothing more than another expression of the relationships already observed between (1) "basic" industries, (2) residential population, and (3) "non-basic" industries.²⁴ The re-distribution of residential population must be viewed in a context that recognizes the vital influence of these other factors.

CONCLUSIONS AND IMPLICATIONS

If the hypotheses set forth here have any validity, one important theoretical conclusion is in order. The metropolitan community must be undergoing a process of increasingly specialized land use, in which sub-areas of the community are devoted more and more exclusively to a limited range of functions. The result of this mounting "territorial differentiation" is increasing segregation, with similar units and similar functions clustering together.²⁵ At the very least, there is a bifurcation between the broad functions of consumption and production, i.e. between residence and employment,²⁶ and the real significance of transportation improvements for the local re-distribution of population is in creating a new scale of distance. In this context, the growth differentials discussed here may be interpreted as mere reflections of a fundamental alteration of community organization in the direction of greater functional and territorial complexity.

²⁴ Hawley, *Human Ecology*, *op. cit.*, pp. 276-286. "Basic" industries locate at particular sites, with the residential population taking up positions with reference to these centers of production and employment. The distribution of residential population, in turn, is the prime determinant of the location of such "non-basic" activities as retail trade and services.

²⁵ The clearest statement of this development is to be found in R. D. McKenzie, *The Metropolitan Community*, New York: McGraw-Hill Book Company, 1933. For more recent empirical evidence, see Leslie Kish, "Differentiation in Metropolitan Areas," *American Sociological Review*, 19 (August, 1954), pp. 388-398.

²⁶ See Leo F. Schnore, "The Separation of Home and Work: A Problem for Human Ecology," *Social Forces*, 32 (May, 1954), pp. 336-343.

Technological and organizational changes are apparently crucial in determining both numerical and distributional changes in population. The outward shift of residential population measured in recent studies can be viewed as one aspect of an important modification in the internal organization of the modern urban community. Under the impetus of technological advances in transportation and communication, the compact city is a thing of the past. Increasing territorial differentiation has been made possible by the increasing flexibility of movement

within the total community. Urban functions and urban populations are now spread over a greatly expanded area. Such a radical change in the spatial distribution of urban functions and of urban people apparently represents an adaptive response to the changing conditions of modern urban life. In long-range terms, decentralization can be conceived as a shift toward a new equilibrium that was initiated by the development of new facilities for the movement of persons, commodities, and information.

ECOLOGICAL CHANGE IN SATELLITE RURAL AREAS *

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THE rapid changes taking place in the rural areas adjacent to cities are frequently objects of comment by observational citizens as well as by social scientists. The relevant data available regarding these changes in the United States are limited in scope and widely known; local observations are frequently reported in the press. The task of developing theory has not been ignored, although such work has been overshadowed by the accumulation of a great deal of descriptive detail.¹ Indeed, the amount of

research and theorizing in recent years makes it imperative that interested persons take time to summarize, evaluate, and synthesize accomplishments to date. This paper represents one such attempt. Attention has been deliberately restricted to ecological and demographic changes taking place in the rural sectors of *satellite areas*, a generic term used here to encompass all varieties of suburbs, satellite cities, fringe areas, commuters zones, and other areas under the immediate influence of the central city. This restriction results from space limitations rather than any idea that other types of change or other sectors of the satellite area are of lesser importance.

The first question to be considered is: Under what conditions does a heavily settled satellite area come to exist?

THE INDUSTRIALIZING SOCIETY

In the discussion that follows it is postulated that both the urban and rural economies are functional parts of the larger econ-

* Revision of a paper presented at the joint meeting of the American Sociological Society and the Rural Sociology Society, September 1956.

¹ Actually, almost no attention has been paid to the effects of urban influences on the rural population as compared to studies of urban people migrating to the rural area. See Kingsley Davis, *Human Society*, New York: Macmillan, 1949, pp. 336-341; E. T. Hiller, "Extension of Urban Characteristics into Rural Areas," *Rural Sociology*, 6 (September, 1941), pp. 242-257; Vernon W. Ruttan, "The Impact of Urban-Industrial Development on Agriculture in the Tennessee Valley and the Southeast," *Journal of Farm Economics*, 37 (February, 1955), pp. 38-56.

In addition, there are a growing number of community case studies that suggest hypotheses: The Institute for Urban Studies, *Accelerated Urban Growth in a Metropolitan Area, A Study of Urbanization, Suburbanization and the Impact of the Fairless Works Steel Plant in Lower Bucks County, Pennsylvania*, Vols. I and II, Philadelphia: University of Pennsylvania, 1954; F. Stuart Chapin, Jr., et al., *In the Shadow of a Defense Plant, A*

Study of Urbanization in Rural South Carolina, Chapel Hill: Institute for Research in Social Science, University of North Carolina, 1954 (Mimeo.); Bureau of Population and Economic Research in cooperation with the Virginia Department of Highways and the U. S. Bureau of Public Roads, *The Impact of Industry in a Southern Rural County*, Charlottesville: University of Virginia, 1956.

omy, and, following Clark² and Fisher,³ that industrialization involves a steady shift of employment and investment from the essential "primary" activities to "secondary" and "tertiary" activities. Indeed, it is possible to describe a model of a dynamic, industrializing society in which economic development occurs primarily in the urban type of locational matrix and in which the economic organization functions best in or near such locations.⁴ In this model industry develops in and is concentrated in urban centers while agriculture is dispersed over the rural area. As industrialization progresses the urban-industrial sector steadily increases its share of the national labor force from possibly 25 per cent at one time to perhaps 90 per cent at a later time. This shift in the allocation of the labor force is possible because of a continuously increasing agricultural productivity, which permits an ever larger proportion of the total population to be engaged in nonagricultural activities. Obviously the changes occurring in the satellite areas of this model would be quite different from those taking place in a society with a stable allocation of the labor force or one with a steady shift from industrial to agricultural employment. It is also apparent that in an industrializing society it is the urban way of life that is dynamic and expanding and that has consequently the greatest impact upon the satellite areas. For this reason it is necessary to examine more closely the nature of the role played by the city in the industrializing society.

Cities are a type of organization with demonstrated ability to maintain large populations in small areas and at a relatively high level of living. Since the density of population in the city precludes the possibility that food stuffs for the population or raw materials for urban industry can be provided within the urban area, it is impossible for the city to be self contained.

² Colin Clark, *The Conditions of Economic Progress*, London: Macmillan, 1940, p. 7.

³ Allan G. B. Fisher, *Economic Progress and Social Security*, London: Macmillan, 1945, p. 6.

⁴ T. W. Schultz, *The Economic Organization of Agriculture*, New York: McGraw-Hill, 1953, p. 147; Stephan L. McDonald, "Farm Outmigration as an Integrative Adjustment to Economic Growth," *Social Forces*, 34 (December, 1955), pp. 119-128.

With its specialization of function, its interdependency of differentiated parts, its emphasis on production, and its dependency upon other areas for materials, personnel, and markets for its products, the city resembles a single great factory in its operation. In a dynamic, industrializing society emphasizing the production and consumption of goods and services the city-factory grows through the development and extension of transportation and communication facilities, which tap an ever larger area for raw materials and for potential customers.

One effect of the extension of transportation and communication facilities into rural areas is to orient farmers toward the urban market, and to speed up the impact of industrialization on farming methods. In contrast to the cities, industrialization on the farm leads to a declining need for workers, and the production of the nation's labor force employed in the agricultural sector declines toward a leveling off point of perhaps 5 or 10 per cent in spite of attempts to develop rural industries. Rural people migrate toward the employment opportunities of the city, a migration with important implications for the satellite rural areas.

Another effect of extending transportation and communication facilities out from the urban center is to make possible the deconcentration of urban population and institutions.⁵ This takes place initially in the form of suburban towns strung out along the railroad lines, but with the coming of the automobile and electricity the pattern increasingly takes the form of a mass settlement of the immediate rural countryside with further settlement strung out for some distance along the highways. However, the total settlement is the result of movement of rural population toward the urban industrial lo-

⁵ The terms decentralization, suburbanization, dispersion, and deconcentration are used very loosely. Deconcentration here means an increase in the proportion of an area's activity that takes place outside of the central city. This corresponds to what Bogue calls suburbanization, a term the writer would prefer to give a more specialized meaning. For a discussion see Evelyn M. Kitagawa and Donald J. Bogue, *Suburbanization of Manufacturing Activity Within Standard Metropolitan Areas*, Oxford: Scripps Foundation for Research in Population Problems jointly with Population Research and Training Center, University of Chicago, 1955, p. 18.

cation as well as of urban population away from the city.⁶

In brief, the very factors that make possible the modern city and insure its continual growth also make possible the dispersion of population into the surrounding area. However, making an event possible does not insure that it will occur. As Schnore has pointed out, the theories of differential economic opportunities, which serve rather well in explaining the growth of independent cities, are completely inadequate in explaining the growth of individual suburbs.⁷ It is quite clear that the suburbs with the fewest job opportunities are growing most rapidly.⁸ In the face of this apparent lack of isomorphism between the economic opportunity theory and the empirical world, sociologists have tended to fall back on social psychological factors and explain deconcentration in terms of the attitudes and motivations of the individuals involved. Schnore suggests as an alternative theory that in this period of rapid population growth the bulk of housing construction takes place where level and relatively unencumbered land suitable for mass production of homes is available. That is, the suburban location of mass produced homes derives from the profit-making aspects of the construction industry; the values and motivations of the families who occupy these homes are partly a carry over of rural and frontier traditions but are probably provided to a large extent by the sales programs of the promoters. This suggests, of course, that in a rapidly growing highly technological society oriented toward "new" and "modern" artifacts and suffering from a long inactive construction program, almost any new residential neighborhoods will appear desirable. Where the society is also characterized by a shifting of a high proportion of its lower income families into middle income brackets,

it can be expected that neighborhoods of new, fully-equipped dwelling units would be quickly filled, almost regardless of type of structure or location of the neighborhood. During recent years in the United States contractors have found it most convenient and profitable to locate such developments in the satellite areas. Where they have done so, the satellite population has increased correspondingly.

It should be noted that the currently popular "rural" amenities offered by suburban or fringe residence frequently are illusory. For example, almost without exception the motivations most frequently offered for moving from the city to the satellite area pertain to a more enjoyable living situation, especially for children. However, in a study of the fringe area of Flint, Michigan, dissatisfaction with recreation facilities for children (40.1 per cent of respondents) was surpassed only by dissatisfaction with street lighting (44.4 per cent) and public transportation (41.7 per cent). Dissatisfaction with recreation facilities for children was mentioned by 26.3 per cent of a comparable sample of Flint residents. The fringe residents were also more dissatisfied with recreational opportunities for teen-agers and adults.⁹

If it is advanced technology that provides transportation and communication facilities and the level of living to make deconcentration of population possible, why are other industrializing countries not experiencing a deconcentration equal to that of the United States? In many of these countries land is not readily available in the satellite areas at a relatively inexpensive price. The limited amount of land must be conserved for essential agricultural uses through land use controls and building restrictions.¹⁰ Few are the countries that are able to convert agricultural land to nonagricultural uses at the current rate of the United States.¹¹ Further-

⁶ Rodehaver found that seven out of ten families in Madison's rural-urban fringe had moved there from urban places. Six out of ten family heads and their wives had been reared in non-urban places. Myles W. Rodehaver, "Fringe Settlement as a Two Directional Movement," *Rural Sociology*, 12 (March, 1947), p. 50. Also see, Walter T. Martin, *The Rural-Urban Fringe*, Eugene: University of Oregon Press, 1953, pp. 60-63.

⁷ Leo F. Schnore, "The Growth of Metropolitan Suburbs," *American Sociological Review*, 22 (April, 1957), pp. 165-173.

⁸ *Ibid.*

⁹ Thomas B. Brademas, "Fringe Living Attitudes," *Journal of the American Institute of Planners*, (Spring, 1956), p. 75.

¹⁰ Noel P. Gist and L. A. Halbert, *Urban Society* (Fourth edition), New York: Thomas Y. Crowell Company, 1956, p. 154.

¹¹ Independent estimates agree that each year during the last decade about 1 million acres of rural land have been converted to urban and related nonagricultural uses. This includes some of the nation's flattest and most fertile farmland.

more, these countries have not yet achieved a level of living that will support the development of a deconcentrated residential pattern such that homes in the satellite areas are provided with all the urban conveniences. Although industrialization provides the technology for deconcentration, a high level of living and plentiful suitable land in the satellite areas are also necessary conditions. Any forecasts regarding the possible deconcentration of urban populations in countries now undergoing industrialization must take all such factors into consideration.

TWO PRINCIPLES OF URBAN-INFLUENCED CHANGE

Given a nation that roughly approximates the model discussed above, what changes could be expected to take place in the ecological characteristics of the satellite rural area? Previous analyses of the extension of urban influenced changes in rural areas have emphasized variations of two broad principles of change—the gradient principle and the principle of differentiation. These same two principles are utilized in the present discussion.

The gradient principle is based upon the work of scholars who have emphasized the concentric zone and gradient effect of city influences on the rural areas. Outstanding among these is von Thünen who developed a theoretical model of the patterning of agricultural activity on a plain of uniform soil fertility surrounding a single city.¹² It will be recalled that he visualized a series of concentric zones of farming activities resulting from the differential requirements of various farm products for accessibility to the central market. The hypothesis is also related to the work of Stewart,¹³ Dodd,¹⁴ and Zipf,¹⁵

Donald J. Bogue, *Metropolitan Growth and the Conversion of Land to Nonagricultural Uses*, Oxford: Scripps Foundation for Research in Population Problems, Miami University, jointly with Population Research and Training Center, University of Chicago, 1956, pp. 4-5.

¹² J. H. von Thünen, *Der Isolierte Staat in Beziehung auf Landwirtschaft und National-ökonomie*, Jena, 1910.

¹³ John Q. Stewart, "Demographic Gravitation: Evidence and Applications," *Sociometry*, (February-May, 1948), pp. 31-58. This author has numerous other relevant publications.

¹⁴ Stuart Carter Dodd, "The Interactance Hypothesis, A Gravity Model Fitting Physical Masses

among others, on the influence of population at a distance. It is consistent with the ecological concept of urban dominance.

This principle holds that at any given moment of time urban characteristics are distributed in the satellite rural area so as to form gradients of decreasing incidence with distance from the city. In a dynamic sense the influences of the expanding urban center can be thought of as extending into the rural area in a gradient which declines in accord with diminishing communication and transportation facilities. Stated in brief form the gradient principle reads: *the extent of urban-influenced changes in rural areas varies inversely with distance to the nearest city and directly with the size of that city.* It can be hypothesized that with increasing technological development the slope of the gradient would become less steep.

The second general principle is a statement of the known tendency for urbanization to transform previously undifferentiated territories by introducing complex specialization of function, differentiation of sub-areas, and functional interdependency of the differentiated parts.¹⁶ This outstanding characteristic of urbanization is very inadequately measured by a scheme that merely considers differentiation by concentric zones. According to ecological theory areal differentiation within the city decreases with distance from the city center. Extension of this principle suggests that rural areas most under the influence of the city would show the greatest differentiation and rural areas most isolated from cities would show the least differentiation.¹⁷ Or, stated formally, *the extent of*

and Human Groups," *American Sociological Review*, 15 (April, 1950), pp. 245-256. This is one of several publications on this theme.

¹⁵ George Kingsley Zipf, *Human Behavior and the Principle of Least Effort*, Cambridge: Addison Wesley, 1949, especially Chapter 9.

¹⁶ Eric E. Lampard, "The History of Cities in the Economically Advanced Areas," *Economic Development and Cultural Change*, 3 (January, 1955), pp. 86-92; R. D. McKenzie, *The Metropolitan Community*, New York: McGraw-Hill, 1933, Part IV; Amos H. Hawley, *Human Ecology*, New York: Ronald Press, 1950, Chs. 13-14.

¹⁷ This is recognized in Hawley's statement regarding the expanding metropolitan community: "The expanded community with its multi-nucleated pattern gains its unity, unlike its predecessor, through territorial differentiation of specialized functions rather than through mass participation in centrally located institutions." *op. cit.*, p. 420.

specialization of function and differentiation of sub-areas in rural territory varies inversely with distance to the nearest city and directly with the size of that city.

The two principles are considered complementary rather than inherently contradictory. While both appear to be consistent with the model, it remains to be seen whether only one or both are sustained by empirical evidence. The two are partially independent in the sense that demonstrated tenability of the gradient principle provides no basis for evaluating the differentiation principle; on the other hand, acceptance of the second indicates that the first holds true at least for this one characteristic.

These two principles are not proposed as hypotheses for rigorous empirical test in this paper; instead, they will serve as organizing devices for ordering and relating the relevant results of various studies published in recent years. However, a number of specific propositions could be derived from these general principles.

It should be emphasized at the start that the data do not permit us to differentiate change occurring through the in-migration of outsiders from changes occurring in the resident population. Also, unfortunately, comparable data are not available for the exact areas that should be examined and approximate areas must be substituted. The best data are those pertaining to the parts of the standard metropolitan areas (S.M.A.'s) lying outside the central cities—the so-called metropolitan ring. Most of the data to be discussed pertain to the constituent parts of these S.M.A.'s. Such figures omit entirely the important suburban and fringe area developments located outside the S.M.A.'s.

The model described above postulates (1) that the over all trends in the economy of an industrializing society lead to increasing population concentration in great metropolitan regions, (2) that locations in or near the city are favorable to the working of the economic organization, and (3) that in the United States at the present time a number of factors including technological advancement, level of living, price, suitability and availability of land combine to bring about the location of new structures in a satellite area. Given this situation, what changes can be expected to occur in the satellite rural

areas of the United States? To what extent do actual changes coincide with expectations?

The Gradient Hypothesis. Nearly a quarter of a century ago McKenzie wrote, "This gradient pattern of a city's influence may be illustrated by many different series of social statistics."¹⁸ This statement has been re-affirmed repeatedly in more recent studies.

1. *Deconcentration of Industry.* The situation just described is clearly conducive to the location of industry in the metropolitan areas but suggests that increasingly such units would be located in the satellite areas rather than near the central area of the major city. That is, industrial units would locate in the satellite area for much the same reasons as those mentioned for residential construction. Any such redistribution of industrial plants would have many implications for change in the satellite areas. What are the findings?

a. Industry is shifting from the central zone to the outer zone of the large city. Reeder found that in Chicago during the 1940-50 decade the inner zone lost 112 industrial plants, but the outer zone of the city gained plants.¹⁹ Such shifts bring industrial jobs closer to the residents of satellite areas and affect their way of life correspondingly.

b. Industry is locating in the metropolitan ring rather than in the central city. While some previous studies had found very little change in the distribution of industry since 1900, Kitagawa and Bogue conclude that "between 1929 and 1939 S.M.A.'s, on the average, underwent a sizable suburbanization of manufacturing."²⁰ They also demonstrate that the apparent lack of redistribution between 1939 and 1947 results from the fact that while 88 areas were deconcentrating, 44 areas were centralizing, thus producing an average rate around zero.²¹ A recent study of building permits in 1955 shows that 64

¹⁸ McKenzie, *op. cit.*, p. 76.

¹⁹ Leo G. Reeder, "The Central Area of Chicago—A Re-examination of the Process of Decentralization," *Land Economics*, 28 (November, 1952), p. 373.

²⁰ Kitagawa and Bogue, *op. cit.*, p. 120. Also, Leo G. Reeder, "Industrial Deconcentration as a Factor in Rural Urban Fringe Development," *Land Economics*, 31 (August, 1955), pp. 276-77.

²¹ Kitagawa and Bogue, *op. cit.*, pp. 67-68.

per cent of the new industrial buildings in the S.M.A.'s and 65 per cent of the value of such buildings took place in the metropolitan rings.²²

c. The greatest concentration of manufacturing relative to population occurs in places of 10,000 population or more located in the metropolitan ring. The central cities rank next and the ring rural area and places of less than 10,000 show the least concentration.²³ Other studies support this finding.²⁴

d. The amount of deconcentration of population is associated with the amount of deconcentration of industry.²⁵ That is, areas favorable to deconcentration of industry also tend to be favorable to deconcentration of population.

Thus, many but not all S.M.A.'s have been experiencing a continuing deconcentration of industry in line with the expectations based on the model. The National Industrial Dispersion Program with its quick tax write-off for properly located industries should to some extent help insure the continuation of this trend in the future.²⁶

The data presented here do not explicitly demonstrate a gradient pattern in this distribution of industrial units, but this is

²² Dorothy K. Newman and Arnold E. Chase, "Study of Metropolitan-Area Structure and Growth with Building-Permit Statistics," paper presented at the annual meeting of the American Sociological Society, September, 1956.

²³ In 1947 the ring cities of 10,000 population or more had 21 per cent more than their share of value added by manufacturing, and 26 per cent more than their share of production workers, relative to their share of the S.M.A. population in 1948. Kitagawa and Bogue, *op. cit.*, p. 24.

²⁴ Reeder, "Industrial Deconcentration," *op. cit.*, p. 276.

²⁵ Kitagawa and Bogue conclude that this relationship is "undoubtedly due primarily to accidental factors—the location of the boundaries of city limits being the principal ore." *Op. cit.*, p. 120. Hawley reports a positive association between the proportion of the S.E.A. labor force engaged in manufacturing and the rate of population deconcentration. *Op. cit.*, p. 120. Also see Leo G. Reeder, "Industrial Location Trends in Chicago in Comparison to Population Growth," *Land Economics*, 30 (May, 1954), pp. 177-182.

²⁶ Peter Edson reported that during the preceding two-year period "2,000 factories representing an investment of more than \$2,000,000,000, have been quietly dispersed from congested urban and manufacturing areas" under this program. *Eugene Register-Guard*, (Eugene, Oregon), October 25, 1953.

clearly the case with most new units being located in or near the city rather than at a considerable distance from it. While wide variation exists among the S.M.A.'s any one of the trends listed brings industrial employment closer to the door of the satellite rural resident.

2. *Deconcentration of Population.* Given the situation described in the earlier section, it would be expected that recent population growth would occur mainly in the standard metropolitan areas, and that within the S.M.A. the greatest growth would be in the satellite areas, especially the satellite rural areas where land suitable for mass produced housing is most readily available. This is definitely the case. Well known trends of the past are continuing with increasing intensity. According to the Bureau of Census an estimated 11,827,000 people were added to the U. S. population between 1950 and 1955, an increase of 7.9 per cent.²⁷ During this same period the S.M.A.'s increased 13.7 per cent, the central cities 3.8 per cent, the metropolitan ring urban 19.1 per cent, and the ring rural 46.5 per cent. The population residing outside the S.M.A.'s increased 0.5 per cent. Of the total increase 97.4 per cent went to the S.M.A.'s: 16.0 per cent to the central cities, 38.3 per cent to the ring urban and 43.1 per cent to the ring rural. Further confirmation comes from an analysis of building permits in the S.M.A.'s in 1955. According to this report 69 per cent of the new dwelling units were located in the satellite areas. This comprised 72 per cent of the value of new dwelling units. In individual S.M.A.'s the percentages are much higher, of course.²⁸ Conformity to the gradient principle in this redistribution of population is confirmed by Bogue who found that the density of both the rural-farm and the rural-nonfarm population decreased with distance from the nearest metropolis.²⁹

Since we are primarily concerned with dif-

²⁷ U. S. Bureau of the Census, "Civilian Population of the United States by Type of Residence, April 1955 and 1950," *Current Population Reports, Population Characteristics*, Series P-20, No. 63, November 2, 1955.

²⁸ Newman and Chase, *op. cit.*

²⁹ Donald J. Bogue, *The Structure of the Metropolitan Community*, Ann Arbor: Horace H. Rackham School of Graduate Studies, University of Michigan, 1949, p. 34.

ferential rates of growth within the metropolitan ring, details are presented in Table 1. The ratios based on Hawley's data show clearly that the rate of increase of the metropolitan ring in relation to the total S.M.A. rate has increased consistently each decade since 1900.³⁰ The larger cities in the metropolitan ring had their most rapid relative growth in 1900-10, but since then the shift has been consistently toward rapid growth in the smaller places. This is the population

decade the rate of redistribution of service activities had been so rapid as to indicate that eventually the distribution of these activities may approximate the distribution of population in the S.M.A.'s.³² This deconcentration of service establishments is mainly explained by the deconcentration of population.³³ The B.L.S. survey of building permits for 1955 shows that 61 per cent of all stores and other mercantile buildings were built in the metropolitan ring. This comprises 65 per cent of the value of such new buildings.³⁴

TABLE 1. RELATIVE POPULATION CHANGES FOR S.M.A.'S AND COMPONENT PARTS, 1900-50

Type and Size of Place	Ratio of Sub-area Rate to Total S.M.A. Rate				
	1940-1950	1930-1940	1920-1930	1910-1920	1900-1910
S.M.A.	1.00	1.00	1.00	1.00	1.00
Metro ring	1.60*	1.58	1.24	.91	.88
50,000 and over	.55	.15	.53	.71	1.21*
25,000-50,000	.61	.34	1.25	.89	1.26*
10,000-25,000	.98	.99	1.20	1.39*	1.10
5,000-10,000	1.49	1.15	1.57*	1.10	1.47
2,500-5,000	1.82*	1.34	1.78	1.58	1.44
1,000-2,500	1.61	1.84	2.11*	1.27	1.28
Under 1,000	1.63	1.75*	1.46	.88	1.04
Unincorporated	2.42	2.72*	1.27	.71	.61

* Decade of most rapid rate of increase relative to the total S.M.A. for each size category.

of the areas of particular concern to this discussion. Unfortunately figures are not given separately for the farm and nonfarm components of this population.

3. *The Deconcentration of Business Activities.* The satellite rural areas are also changing through a deconcentration of business activities within the S.M.A.'s. While there is considerable variation among the individual S.M.A.'s, the general picture is one of rapid development in the metropolitan ring. Cuzzort found for 147 S.M.A.'s in 1948 that the metropolitan ring, and especially the rural segment of the ring, did not have its proportionate share of service receipts, service establishments, or service employees.³¹ However, during the preceding

decade the rate of redistribution of service activities had been so rapid as to indicate that eventually the distribution of these activities may approximate the distribution of population in the S.M.A.'s.³² This deconcentration of service establishments is mainly explained by the deconcentration of population.³³ The B.L.S. survey of building permits for 1955 shows that 61 per cent of all stores and other mercantile buildings were built in the metropolitan ring. This comprises 65 per cent of the value of such new buildings.³⁴

4. *Occupational Composition.* According to the model it would be expected that expanding urbanization would generate an urban type occupational composition in the rural areas as rural residents increasingly participate in the economic opportunities of the city. The evidence of recent studies supports the hypothesis that such specialization occurs and that it conforms to the gradient. Using a four way classification of counties in the United States, Duncan and Reiss found for employed males and females separately, in both the rural-nonfarm and rural-farm populations, that the per cent employed in white-collar occupations ranged downward in a gradient from the "most urban" counties to the "least urban" counties.³⁵ For example, the proportion of employed males in the rural-farm population that are engaged in white-collar occupations is over two-and-one-half times as great in the most urban counties as in the least urban counties.³⁶ A similar downward gradient exists for the per cent of rural-farm females in

Population Problems jointly with Population Research and Training Center, University of Chicago, 1955.

³⁰ *Ibid.*, p. 50. For example, the number of service establishments had increased 18.9 per cent in the ring rural, decreased 5.4 per cent in the ring urban, and declined 13.7 per cent in the central cities. *Ibid.*, p. 14.

³² *Ibid.*, p. 51.

³⁴ Newman and Chase, *op. cit.*

³⁵ Otis Dudley Duncan and Albert J. Reiss, Jr., *Social Characteristics of Urban and Rural Communities, 1950*, New York: John Wiley and Sons, 1956, pp. 163-166. "Most urban" counties are metropolitan counties containing a city as large or larger than 250,000 population; "least urban" designates nonmetropolitan counties having no city as large as 25,000 population. The writer is indebted to Duncan for the opportunity to review this and other manuscripts prior to publication.

³⁶ *Ibid.*, p. 165.

³⁰ Based on data from Amos H. Hawley, *The Changing Shape of Metropolitan America*, Glencoe: Free Press, 1956, p. 25.

³¹ Raymond P. Cuzzort, *Suburbanization of Service Industries within Standard Metropolitan Areas*, Oxford: Scripps Foundation for Research in

the labor force³⁷ and for the per cent of employed farm males engaged in non-farm occupations.³⁸ For farm operators the per cent working 100 days or more off their farm is nearly twice as high in the most urban countries as in the least urban.³⁹

5. *Rural Land Values.* Land value is another general measure of the adjustment made in the rural area to location adjacent to the urban-industrial center.

As a general measure of urban influence, land values should be highest in areas nearest to urban centers and lowest in the most distant areas. Furthermore, this variation should be independent of soil fertility or other nonsocietal conditions. This hypothesis is substantiated by Hiller's study of tiers of townships in 53 areas in the Middle West. Both for the value of agricultural land per acre and the per acre value of buildings, it was found that urban influence tended to produce high values in the townships nearest the cities with a downward gradient to townships in the outer tier.⁴⁰ Similar support comes from a recent study of the influence of location on farmland prices in Oklahoma. This analysis showed that without exception the selling price per acre of farmland was higher on the average in locations with the greatest accessibility to urban markets and thus greater exposure to urban influences. These findings clearly held regardless of soil quality.⁴¹ The high value of land is an important factor in the selective redistribution of population, farming, and commercial enterprises in the area.

6. *The Nature of the Farming Enterprise.* In relation to the high value of land in satellite areas it is generally recognized that farms are smaller and farming more intensive in areas near the city. The farming situation is undoubtedly affected by accessibility to the city. In this regard Lösch has recently stated ". . . in a dynamic economy Thünen rings must be formed."⁴² Duncan reported find-

ing "significant urbanization gradients for the incidence of farm tenancy, the form of tenure, and farm characteristics related to tenure."⁴³

7. *Income.* In accord with the model and the findings regarding occupational composition, the satellite rural population should share the economic benefits of the urban-industrial situation.

Ruttan concludes on the basis of a painstaking analysis that "the [median] income level achieved by rural-farm families from [farm and nonfarm sources] does bear a direct and positive relationship to the relative level of urban-industrial employment in the same area."⁴⁴ Furthermore, the total income of farm people in these areas has a moderately high positive correlation with the per cent of the total population that is nonfarm.⁴⁵ Indeed, the income of the farm population has almost as high a correlation with the level of urban-industrial employment in the area as does the income of the nonfarm population.⁴⁶ While the average income of farm workers from farming has a negative relationship with per cent of the farm population employed in nonfarm work, this probably results from the selection of nonfarm workers from the most productive age group of the rural population.⁴⁷ The per cent of farms with nonfarm family income exceeding farm income in 1949 shows a definite downward gradient from most urbanized to least unurbanized countries.⁴⁸

liam H. Woglom with the assistance of Wolfgang F. Stolper, New Haven: Yale University Press, 1954, p. 57.

⁴³ Otis Dudley Duncan, "Note on Farm Tenancy and Urbanization," a revision of a paper presented at a meeting of the North Central Land Tenure Research Committee in Chicago, April 19, 1956, p. 2.

⁴⁴ Ruttan, *op. cit.*, pp. 40-42.

⁴⁵ *Ibid.*, p. 46.

⁴⁶ *Ibid.*, p. 42. This investigator also reports that between 1930 and 1950 most of the areas in the South that "caught up" with the national average on the Hagedorn level of living index for rural-farm families "either include, or are located in close proximity to, developing urban centers." Vernon W. Ruttan, "Economic Development and Adjustments of Southern Low-Income Agriculture: Discussion," *Journal of Farm Economics*, 36 (December, 1954), p. 1159.

⁴⁷ Ruttan, "The Impact of Urban-Industrial Development . . .," *op. cit.*, p. 48.

⁴⁸ Duncan and Reiss, *op. cit.*, pp. 167-168.

³⁷ *Ibid.*, p. 162.

³⁸ *Ibid.*, p. 165.

³⁹ *Ibid.*, p. 167.

⁴⁰ Hiller, *op. cit.*, pp. 252-253.

⁴¹ L. A. Pacher, *The Influence of Location on Farmland Prices*, Stillwater: Oklahoma Agricultural Experiment Station, Oklahoma Agricultural and Mechanical College, March, 1954, pp. 5-6.

⁴² August Lösch, *The Economics of Location*, translated from the second revised edition by Wil-

8. Age and Sex Composition. One effect of the characteristics just mentioned is on the age and sex composition in the satellite rural area. These areas have a spatial location that facilitates population exchange with both rural and urban areas. Rodehaver found a two directional influx with age and family cycle characteristics varying according to the origin of the in-migrants.⁴⁹ The rural-farm population of satellite areas is subjected to a greater than usual loss to the urban-industrial situation. In this regard Duncan reports, "rural farm populations in the most unurbanized counties have high proportions of older adults and low proportions of children when compared with the rural farm populations of the least urbanized counties."⁵⁰ Hiller found that the attraction of cities for the mobile younger adult group varied considerably with the size of the city.⁵¹ He also reported an upward gradient for the sex ratio of the total (rural and urban) population by tiers of townships around cities.⁵² It is not clear in these studies just what influence is played by differential birth and death rates.

9. Fertility. The finding of a fertility gradient in previous studies⁵³ is further supported in the Duncan and Reiss analysis. Both rural-nonfarm and rural farm fertility ratios grade upward, moving from the most urban to the least urban counties, but the effect is more pronounced for the rural-farm fertility ratio.⁵⁴

10. Educational Achievement. Higher educational achievement is another urban characteristic. Duncan reports that the median number of school years completed is higher in the most urban counties than in the least urban counties: 1.3 years higher for the rural nonfarm population and about .5 for the rural farm population.⁵⁵ As he says, the

differences may reflect both the superior educational opportunities of rural areas near cities and the stimulation to accept these opportunities provided by contact with the urban way of life. In addition, there is the unmeasured selective effect of the migration into the satellite rural areas.

11. Participation in Urban Activities. The gradient pattern almost certainly holds for the participation of rural residents in urban located activities.⁵⁶ Several investigators have found that former urbanites residing in the rural area participate more in urban affairs than other fringe residents.⁵⁷ In this instance, at least, the proportion of former urban dwellers in the population may be an important factor in the observed variation between areas. It is not clear, however, whether these results obtain from the higher income, which permits participation in urban activities, the experience gained by rural people from participation in urban occupations, which might ease the way for social activities, or simply the greater accessibility to urban events.

Evidence from many different studies appears consistently to support the idea that ecological and demographic characteristics of satellite rural areas differ importantly from populations of more distant rural areas. Furthermore, continuing changes appear to be consistent with the expectations of the model and in conformity with the gradient principle.

The Differentiation Principle. The second principle, without denying the gradient effect of urban influences, holds that these influences are extended selectively rather than diffusing uniformly, and that the over all effect is to transform the homogeneity of the rural territory into an urban-like heterogeneity with specialization of labor, differ-

⁴⁹ Rodehaver, *op. cit.*, pp. 53-55.

⁵⁰ Otis Dudley Duncan, "Gradients of Urban Influence on the Rural Population," a paper read before the Midwest Sociological Society, April, 1955.

⁵¹ Hiller, *op. cit.*, pp. 251-254.

⁵² *Ibid.*

⁵³ Stewart, *op. cit.*, p. 44; Warren S. Thompson and Nellie E. Jackson, "Fertility in Rural Areas in Relation to their Distance from Cities, 1930," *Rural Sociology*, 5 (June, 1940), pp. 143-162; Edmund de S. Brunner and J. H. Kolb, *Rural Social Trends*, New York: McGraw-Hill, 1933, pp. 114-116.

⁵⁴ Duncan and Reiss, *op. cit.*, p. 157.

⁵⁵ Duncan, "Gradients of Urban Influence on the Rural Population," *op. cit.*

⁵⁶ N. L. Whetten and E. C. Devereux, Jr., *Studies of Suburbanization in Connecticut*, No. 1, "Windsor: A Highly Developed Agricultural Area," Bulletin 212, Storrs: Agricultural Experiment Station, Connecticut State College, October, 1936, p. 102; Harold C. Hoffsommer, *Relation of Cities and Larger Villages to Changes in Rural Trade and Social Areas in Wayne County, New York*, Bulletin 582, Ithaca: Cornell University Agricultural Experiment Station, February, 1954, p. 59.

⁵⁷ Walter T. Martin, "A Consideration of Differences in the Extent and Location of the Formal Associational Activities of Rural-Urban Fringe Residents," *American Sociological Review*, 17 (December, 1952), p. 691; Rodehaver, *op. cit.*, p. 56.

entiation of subareas, and functional interdependency of parts. In spite of the almost complete lack of research concern with this principle, it would seem to have as much or greater implication for changes occurring in rural areas than does the gradient principle, which has been dealt with so frequently. The differentiation principle concerns the dynamics of the relationship between the rural and urban sectors of the economy, and the increasing integration of rural areas into the great regional urban complexes. While this idea has been stressed by McKenzie and others,⁵⁸ there is a surprising lack of empirical research.

Bogue has provided evidence on the selective extension of urban influences by showing that ecological and demographic characteristics of the satellite areas vary by type of sector as well as by distance to, and size of, the nearest metropolitan center.⁵⁹ However, this selective extension of urban influences is only part of this hypothesis. The essence is the differentiating influence of the urban center—the transformation of rural homogeneity into heterogeneity. The writer is aware of only one study dealing with this problem, and this concerns cities of the metropolitan ring rather than satellite rural areas. Kish classified incorporated places by distance zones from the central city and demonstrated conclusively that for a variety of variables the cities of the distant zones made up a relatively homogeneous universe while those in the inner zone were highly differentiated on the same counts.⁶⁰

On a logical *a priori* basis, it seems likely that the rural-farm and rural-nonfarm populations undergo a similar metamorphosis under the influence of urban centers. It was shown in connection with the first principle that a definite increase in the complexity of the division of labor does occur in such situations, and, as Lampard says, "specialization of functions makes inevitably for specialization of areas."⁶¹ Similarly, differentia-

tion of areas makes for functional interdependency of these specialized parts. Thus, the satellite rural areas change under the influence of the nearby city. Specialization increases and with it all the differentiation that goes with differences in occupation. The subareas of the satellite rural areas become intricately bound together, not only with one another, but even more so with the specialized areas of the adjacent city. All are part of the expanding metropolitan economy.

SUMMARY

The ecological and demographic changes taking place in the satellite rural areas of technological societies are directly related to changes in the dynamic relationship between the rural and urban sectors of the industrializing society. The changing allocation of the labor force in such societies insures urban growth at the very time that technological advances make possible the extensive separation of home and work. However, deconcentration can take place to any sizeable extent only when there is plentiful land available inexpensively in the satellite rural area and when the prevailing level of living is very high. In the United States, where the necessary conditions prevail to an unequalled extent, the heavy deconcentration of industry, population, and business, and the accompanying conversion of rural land to nonagricultural uses are producing impressive changes in the rural sectors of the satellite areas.

The findings of a number of studies show that these changes in the satellite rural areas conform consistently with the gradient principle of urbanization. In contrast, the evidence that these changes are consistent with the differentiation principle tends to be impressionistic and unsystematic. In spite of the inadequacies of the data, however, it seems highly probable that the rural sectors of the satellite areas, like the urban sectors, more and more consist of well differentiated subareas as the influence of the central city is extended increasingly throughout the larger metropolitan area. The changing patterns in population density, age and sex composition, occupational composition, and land values, to name a few characteristics, are

⁵⁸ McKenzie, *op. cit.*, Hiller, *op. cit.*, Hawley, *op. cit.*

⁵⁹ Bogue, *The Structure of the Metropolitan Community*, *op. cit.*, p. 47.

⁶⁰ Leslie Kish, "Differentiation in Metropolitan Areas," *American Sociological Review*, 19 (August, 1954), pp. 388-398.

⁶¹ Lampard, *op. cit.*, p. 92.

societal adjustments in the satellite areas to the evolving spatial organization of the metropolitan community. With this continuing "metropolitization" selected parts of the satellite rural areas become incorporated legally as well as functionally into the city

and their places are taken by other rural areas brought into the city's immediate sphere of influence. Thus, change is continuous in the satellite areas; a search for the characteristic sequential patterns of this change is the task remaining.

THE NEGRO IN NEW ORLEANS: A FUNCTIONAL ANALYSIS OF DEMOGRAPHIC DATA *

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POULATION study and sociology have shown a tendency toward convergence.

From separate origins the fields have moved towards an increasing interdependence.¹ All too seldom, however, has the relevance of sociological theory for demographic analysis been verified.² Probably one of the more crucial questions in this connection is the relation between population characteristics and processes³ on the one hand and

social values on the other. It is the task of this paper to indicate such a relationship and to reach this goal through an explanation of some observed demographic differentials by means of a particular sociological theory. Specifically, the hypothesis is advanced that *one function of the white man's definition of the racial situation is to create demographic differentials between his own and the Negro population*. One would logically expect that such a hypothesis could be verified. This paper attempts to show by empirical and theoretical demonstration that the hypothesis is tenable for at least one city.

Racial differentials constitute an important focus of this paper, but explaining an entire pattern of race relations represents a broader and more complex approach than that employed here. A new theory is not presented; the one to be used is well established.⁴ Instead, selected data of one area are used with a theory of another. The problem is this: Why are there a host of demographic differences between two races in a southern city? (See Table 1.) Emphasis is given (1) a relatively comprehensive set (though only one type) of demographic data and (2) differentials rather than absolute levels. To the writer's knowledge, no single theory has yet been offered which integrates such information.⁵ This paper represents an effort in that direction.

litical status, whereas population processes refer to birth, death, and migration. Religious status was excluded because of lack of data.

⁴ Cf. Robert K. Merton, "The Self-Fulfilling Prophecy," *The Antioch Review*, 8 (June, 1948), pp. 193-210.

⁵ More concretely no theory will explain demographic differentials within a single bi-racial popu-

* This paper is based on a chapter from the writer's unpublished doctoral dissertation, "The Negro in New Orleans: A Demographic Analysis," Louisiana State University, 1954.

¹ Whether one begins the history of demography with Sir Walter Raleigh, John Graunt, or Thomas Malthus, a considerable period of time elapsed before Herbert Spencer (probably the first clearly recognizable sociologist to write in this field) put forth his theories of population. Cf. James Bonar, *Theories of Population from Raleigh to Arthur Young*, New York: Greenberg, 1931; Warren S. Thompson, *Population Problems*, 4th ed., New York: McGraw-Hill, 1953; and Harry Elmer Barnes (ed.), *An Introduction to the History of Sociology*, Chicago: The University of Chicago Press, 1948.

² The writer is not speaking here of logical analyses of the relations between the two areas. Cf. Kingsley Davis, *Human Society*, New York: Macmillan, 1949, Ch. XX, and Amos H. Hawley, *Human Ecology*, New York: Ronald Press, 1950, pp. 70, 77-79, *et passim* for excellent attempts in this direction. Rather the claim is made that there is a deficiency of empirical tests of the relation of sociological theory to data which describe the changing sizes of populations, i.e., demography.

For the purpose of this paper, it matters not whether demography is considered as a sister discipline or a sub-field of sociology. What is more relevant is the importance of delineating the relationship, whatever it may be, through actual research.

³ Population characteristics are here defined to include age, sex, and familial composition, marital status, educational status, economic status, and po-

THE DATA

The data for the study are taken from an extensive demographic investigation of the Negroes of New Orleans.⁸ To better emphasize demographic differentials, the condition of the Negro was described in relation to that of whites. This method found definite and important demographic differences between the two races and these are summarized for 1950 in Table 1. Numerically speaking, Negroes were a minority people. Compared with whites, they were disproportionately concentrated in the younger ages. Females were also relatively more numerous. Measured by the prevalence of broken families, family life was more unstable. Negroes received less education and had occupations with less status and smaller income. Disproportionately fewer of them achieved the right to vote. Their fertility was higher, their mortality greater, and they were less often found as migrants.

These differentials are not confined to the New Orleans Area, but are generally recognized in demographic literature. An understanding of the factors underlying dissimilarities in New Orleans may thus have wider application.

THE THEORY

The basic theory to be used in explaining the differentials is derived from one originally set forth by Thomas: "If men define situations as real, they are real in their consequences."⁹ Although numerous earlier investigators had anticipated this statement, it remained for Thomas to state it in what could be termed codified form. Yet perhaps the very succinctness and simplicity of the principle were disarming, for few bothered to inquire more fully into what Thomas had

lation and will extend over all major aspects of population composition and processes. The present theory is applicable only where a socially more powerful group defines a subordinate group as inferior. See also the section "Theoretical Integration of the Data," below.

⁸ Hillary, *op. cit.* The focus of investigation was the Standard Metropolitan Area of New Orleans and its constituent parts. For the sake of abridgement, only data for the city of New Orleans, proper, are presented in this paper.

⁹ W. I. Thomas and Dorothy S. Thomas, *The Child in America*, New York: Alfred A. Knopf, 1928, p. 572.

said.⁸ Merton, however, has provided an interpretation whereby the abstraction may be employed to lend form to empirical data. According to Merton, the first part of the theorem indicates that men respond not only to objective features of a situation; they respond to the meaning this situation has for them. And once that meaning has been assigned, it determines not only men's behavior but also some of the consequences of that behavior.⁹ Thus, the act of making the definition is also an act of making a prophecy, and the very fact that the definition comes into existence creates conditions whereby the prophecy will be realized. The definition is accordingly a "self-fulfilling prophecy," as Merton has termed it. The degree of objective truth in the assertion has no effect on its eventual social fulfillment. The essential quality is initial belief. In fact, as Merton has so aptly stated:

The self-fulfilling prophecy is, in the beginning, a *false* definition of the situation evoking a new behavior which makes the originally *false* conception come *true*. The specious validity of the self-fulfilling prophecy perpetuates a reign of error. For the prophet will cite the actual course of events as proof that he was right from the beginning.¹⁰

Possibly the most difficult point to grasp in this connection is that there is no conspiracy to "make" the definition come true. Rather, in my opinion the "fulfillment" occurs unintentionally—or, more precisely, comes about through unforeseen and unintended consequences. The problem, however, is not simple. There are several aspects that must be investigated, two of which have divergent consequences. For example, the "white man's" definition that the Negro is inferior is intended to accomplish nothing, for its believers feel that the definition is gospel—it is taken as a given. In this sense,

⁸ This statement does not, of course, imply that the principle has not been accepted as valid by social scientists nor that it has not been subjected to verification. One of the more notable attempts at demonstration is represented by Gunnar Myrdal, with the assistance of Richard Sterner and Arnold Rose, *An American Dilemma*, New York: Harper & Bros., 1944. Even this treatment is deficient in not explicitly showing the connection between the Thomas theorem and the data presented.

⁹ Merton, *op. cit.*, p. 194.

¹⁰ *Ibid.*, p. 195.

TABLE 1. SUMMARY MEASURES OF DEMOGRAPHIC DIFFERENTIALS BETWEEN NONWHITES AND WHITES
NEW ORLEANS: 1950 *

	Nonwhite †	White	Difference (White- Nonwhite)	Ratio ‡‡ (Nonwhite White)
Number	182,631	387,184	205,183	.47
Per cent	32.0%	68.0%	36.0%	.47
Median age (years)	28.2	32.3	4.1	.87
Dependency ratio ‡	54.2	43.6	-10.6	1.24
Sex ratio	87.0	92.0	5.0	.95
Index of family instability §	55.0	27.4	-27.6	2.01
Persons living as married couples	50.5%	59.9%	9.4%	.84
Median years of schooling completed (population 25 years of age and over)	6.5	9.6	3.1	.68
Males in service production work **	30.6%	60.1%	29.5%	.51
Males in physical production work **	68.4%	39.0%	-29.4%	1.75
Males in white collar work **	11.4%	52.8%	41.4%	.22
Males in blue collar work **	87.6%	46.3%	-41.3%	1.89
Median income of families and unrelated individuals (1949)	\$1,381	\$2,900	\$1,519	.48
Median contract monthly rent	\$16.49	\$31.57	\$15.08	.52
Voters per 100 eligible voters (males, 1952)	29.9	81.8	51.9	.37
Crude birth rate	33.3	21.9	-11.4	1.52
Fertility ratio ‡‡	480	396	-84	1.21
Gross reproduction rate	187	128	-59	1.46
Three-year mean death rate (males, 1949-1951)	13.2	11.6	-1.6	1.14
Three-year mean death rate (females, 1949-1951)	10.7	8.8	-1.9	1.22
Infant mortality rate	34.5	27.0	-7.5	1.28
Persons residing in different county in 1950 than in 1949 (preliminary count)	2%	4%	2%	.50
Net migrants per 1,000 population	22.0	50.7	28.7	.43

* Source: George A. Hillery, Jr., "The Negro in New Orleans: A Demographic Analysis," unpublished doctoral dissertation, Louisiana State University, 1954; United States Bureau of the Census, *U. S. Census of Population: 1950*, Washington: Government Printing Office, 1952, Vol. II, Part 18; *U. S. Census of Housing: 1950*, Washington: G. P. O., 1952, Vol. I, Chap. 18; *1950 Census of Population: Preliminary Report, Series PC-5*, Washington: G. P. O., June 10, 1951, No. 32; National Office of Vital Statistics, *Vital Statistics of the United States, 1949*, Washington: G. P. O., 1951, Part II; *Vital Statistics of the United States, 1950*, Washington: G. P. O., 1953, Vol. III; Louisiana State Department of Health, *Statistical Report of the Division of Public Health Statistics, 1951*, New Orleans: n.d.; State of Louisiana, *Report of Secretary of State to his Excellency Robert F. Kennon, Governor, From January 1, 1951 to December 31, 1952*, Baton Rouge: Thos. J. Moran's Sons, 1953.

† Nonwhites in the city of New Orleans were 99.5 per cent Negro in 1950.

‡ The ratio is computed by dividing the statistic for nonwhites by the comparable statistic for whites. A ratio above 1.00 thus measures the proportion by which nonwhites exceed whites for a given measure, whereas a ratio below 1.00 shows the reverse.

§ Persons under 15 years and 65 and over per 100 persons 15 to 64 years of age.

** Number of broken families per 100 persons living as married couples. Letting M equal persons married, Mc equal married couples, D equal persons divorced, W equal persons widowed, the index is computed as follows: $\frac{D+W+M-2Mc}{2Mc} \times 100$, where M-2Mc equals persons separated for whatever reasons.

*** These categories are the functional and status groupings of occupations employed by Ronald Freedman in his *Recent Migration to Chicago*, Chicago: The University of Chicago Press, 1950, pp. 26-27.

†† Children under 5 per 1,000 women 15 to 44 years of age.

the definition has no intended consequences, no manifest functions. One cannot deny, however, that there are certain crucial consequences of this definition: the "inferiors" are awarded a lesser share in the privileges and opportunities of society. The reasoning may run somewhat as follows: "These people are inferior. Thus, they can receive only inferior benefits from *any* material provided them. It follows that one is wasting time and effort if he provides them with anything more than inferior material." The "definers" do not give the "inferior material" to prove their point. They do so because their point (*to them*) is proven. That is, the definers intend only to act in accordance with their initial definition that the Negro is inferior. There is thus a two-edged sword: the whites have no intention of proving the definition, but they do intend to live up to its stipulations. This intention and the acts accompanying it (awarding lesser shares in the society, etc.) can properly be labeled manifest functions, or intended consequences of the definition.

These manifest functions, further, provide additional and now unintended consequences (or latent functions) in creating other deficiencies. These deficiencies, together with the original lesser share of privileges and opportunities, have in turn the unintended consequences or latent functions of providing "unquestionable" evidence that the definition is really what it purports to be—a truth.

These functions can be outlined as follows:

Initial definition: The out-group is inferior (or, at least, "not as equal" as the in-group).

First intended consequence: The in-group assumes the definition is true and treats the out-group as inferior, giving the members certain "inferior materials" or privileges.

Resulting unintended consequence: The out-group is placed in situations where its members receive additional unequal privileges, and inequalities relative to the in-group spread to most if not all segments of their life.

Unintended consequences of the above two consequences: (1) The out group does become inferior (at least in a social sense); and (2) the definition is accordingly accepted by the in-group as proven.

The important point in the foregoing is that most of the functions of the initial defi-

nition are latent, not manifest, unintended, not intended.¹¹ Without this realization, it is a simple matter to overlook the importance of values for guiding social action and to impute to white southerners the unsubstantiated traits of stupidity and dishonesty.

THEORETICAL INTEGRATION OF THE DATA

The testing of the relation between the theory and the data is done primarily by indicating the logical nature of the connection. Beginning with the self-fulfilling prophecy and utilizing functional analysis, the writer hopes to show that the ethnic differences as found demographically (see Table 1) are what would be anticipated if the self-fulfilling prophecy is a valid concept.¹² For example, it can be noted that, according to the theory, when A exists, B can be expected to follow. If the data show such a condition, the theory is validated *to that extent*. The more theoretical expectations that are verified, the greater the validity of the theory. To claim, however, that this paper can *prove* the theory would disregard canons of scientific research. The relationship is indicated here for only one city (New Orleans), one brief segment of time (mainly 1950 and the preceding decade), and two groups (white and Negro). There *could* be wider applicability, as has been noted. Nothing more is claimed.

That the New Orleans white population defines the Negro as inferior can be readily demonstrated, particularly in such matters as restrictions on Negro voting, poorer educational facilities allocated, and enforced segregation. More important, data from an earlier study indicate that the Negroes themselves believe that white persons define them as inferior.¹³ Such a definition (or prophecy)

¹¹ This observation is in general agreement with the finding that prejudiced persons do not tend to realize that they are prejudiced. See Gordon Allport and B. M. Kramer, "Some Roots of Prejudice," *Journal of Psychology*, 22 (July, 1946), pp. 34-36.

¹² Thus, in addition to describing the relation between sociology and demography, another effort will be directed towards validating the theory of the self-fulfilling prophecy, itself. Merton's excellent analysis relies more on illustration rather than demonstration, though admittedly the distinction between the two techniques is vague. In this connection, see also footnote 8.

¹³ George A. Hillery, Jr., "The Presence of Com-

is the initial stimulus in activating a series of consequences. Hence, the Negroes are given poorer educational facilities, both in cost and in space. They emerge with a lower educational level, and this condition in turn (and that of discrimination in general) has the unintended consequence of handicapping their search for jobs, a handicap reflected in the disproportionate concentration in jobs requiring more physical effort and vested with less authority. As an additional latent function, the level of living would be expected to be lower than the whites', and the evidence attests to that expectation.

The lower educational level also has the functional consequence of lowering the degree to which the mores of the larger society are inculcated in the Negroes. In addition, a lower economic level signifies a closer proximity to marginal subsistence. These two factors could be expected (at least as one consequence) to influence the Negro family to deviate in form from that of the larger society. Such deviation is also a matter of record, especially in the more unstable family pattern as measured by the greater number of broken families. The relationship that relative ignorance, poverty, and familial instability bear to mortality would lead one to expect the latent function of higher mortality to be realized. In fact mortality rates for Negroes are higher than those in the white population.

In a sense, the chain of consequences approaches completion when mortality is recognized as an index of the incidence of disease. A higher disease level would tend to lower the educational and economic levels, and high mortality rates can have as one of their immediate consequences broken families (though again unintended). Even the sex ratio of Negroes does not go untouched: the larger study showed evidence of a connection between high stillbirth rates and low sex ratios at birth—the former influencing the latter.¹⁴ High stillbirth rates can be regarded, of course, as a consequence of the educational, economic, and mortality levels.

The self-fulfilling prophecy, however, has varied ramifications, and accordingly there is no simple chain of consequences. Education may be singled out for emphasis, for this factor clearly reveals the absence of any unilinear causality. The lower educational level makes for a lower level of knowledge of birth control. Accompanying this observation is the higher fertility of the New Orleans Negroes. This higher fertility is reflected also in the higher dependency ratios, which further affect the level of living. Just which of these two variables is without consequences for the other is difficult to say. There is possibly an additional function: low economic levels and a felt discrimination would be expected to depress in-migration rates, and such lowered rates were found among the people studied.¹⁵

Meagre educational attainments are also intimately related to political activity, since education is to a large degree in the hands of the local government. A smaller political voice means a smaller degree of political control. Practically nonexistent until quite recently, the Negro's political voice is still numerically weak. When accompanied by a definition of Negro inferiority, such a situation would be expected to have the consequences of inadequate educational facilities and lower educational status for Negroes. Again the data uphold the expectations.

An interesting feature of this complex of relationships is the relative dearth of any dysfunctional elements. Thus, most of the consequences of the definition of the Negro's situation tend to sustain that definition, i.e., they are functional for the definition. The few dysfunctional elements arising from the definition, i.e., elements that tend to destroy it, are either unimportant or are accompanied by functional elements. For example, a functional consequence of the definition of Negro inferiority has been segregation—functional because it emphasized that there were Negro-

munity Among Urban Negroes: A Case Study of a Selected Area in New Orleans," unpublished master's thesis, Louisiana State University, 1951, pp. 203-208.

¹⁴ Hillery, "The Negro in New Orleans," *op. cit.*, pp. 198-199.

¹⁵ More specifically, discrimination and low economic levels would be expected to raise out-migration rates and lower those for in-migration, *provided* that the migrating population believed migration would alleviate their situation. Otherwise, the only remaining effect would be to lower the general incidence of migration. The writer had data only for in-migration and net migration. Both sets of data showed lower rates for Negroes than whites.

white differentials distasteful to the whites, or, practically speaking, represented inferior qualities. This consequence of segregation, however, has favored the creation of a Negro professional and business class (especially doctors, teachers, and undertakers), which has the consequence of standing as disproof of the definition and is thus dysfunctional for it. However, it must be remembered that this situation is accompanied by segregation, which itself has the functional consequence of isolating this upper stratum of Negroes from the whites, a condition which serves as a cushioning effect for any dysfunctional consequences arising from that condition.

The ultimate effect of this relative lack of dysfunctional consequences is that the entire system has a high degree of functional autonomy. There is little that tends to destroy the system. We can then expect it to exhibit a high degree of resistance to change. This point, of course, does not have to be labored. The lineage of the system extends over several centuries, and the tenacity with which white New Orleanians are presently resisting the effects of the Supreme Court's 1954 public school desegregation decision are only too well known.

CONCLUSION

The analysis is obviously incomplete. It has been handicapped by a lack of data on values and attitudes. These have not as yet become the proper—or perhaps even the available—tools of demographic investigation, but, as the discussion has possibly indicated, they are nevertheless fundamental in interpreting demographic phenomena.

It would be a truism to add that the situation as depicted greatly simplifies, perhaps over-simplifies, a complex matter. Numerous specific questions remain unanswered: What purely biological processes (if any) accentuate (or lessen) the fertility and mortality differentials? What has been the influence of historical factors, such as the formation of the self-fulfilling prophecy, the source of varying types of migrants, etc.? Urbanism has probably had an influence in modifying the self-fulfilling prophecy—how much of an influence? The reader can easily complicate the situation further.

The fundamental goal of this paper is more modest: to delineate empirically and theoretically at least one aspect of the relation between two areas of investigation. One type of demographic phenomenon, racial differentials, was related to one sociological theory, and the evidence has been consistent with that theory. Briefly, the members of the dominant group have defined the Negro as inferior. This definition, or prophecy, has set in motion forces that tended to fulfill it, and the forces have served to create differences in the manner in which the two groups have changed their numbers. In other words, the self-fulfilling prophecy has helped to bring about differences in the population processes of these two races, and these differences have created further differences in their population characteristics, the characteristics in turn influence the processes and are influenced by the self-fulfilling prophecy. Finally, these influences of the prophecy stand as evidence, regardless of how circular, of the fulfillment of the prophecy and accordingly tend to perpetuate it.

FERTILITY AND MORTALITY IN THE ROCKY MOUNTAIN WEST *

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THIS article is based on a research project designed to test a set of hypotheses concerning the relationships of fertility and mortality to the degree of urbanism¹ and average socio-economic status² for a group of counties delineated as the Rocky Mountain West.³

In many respects the Rocky Mountain West is the last frontier of the nation. It is an inland "empire," a unique region of the United States with an economy that is greatly influenced by its physiography and climate. Ranching, mining and farming are its major economic enterprises, but the character and size of the region have also allowed the development of substantial activities in transportation, recreation, and forestry.

The Rocky Mountain West incorporates 199,328 square miles of territory, mostly mountainous and practically all lying at an elevation in excess of 5,000 feet. In 1940 the population of the area was 703,099, of which 29.8 per cent was classified urban, 39.8 per cent rural-nonfarm and 30.4 per cent rural-farm. It includes 6.6 per cent of the area of the United States and in 1940 was inhabited by .5 per cent of the nation's population. The population density of the area in 1940 was 3.5 inhabitants per square mile, as compared to 44.8 inhabitants per square mile for the United States as a whole.⁴

* The writer gratefully acknowledges the assistance of Wendell Bell, Kimball Young and the late Paul K. Hatt in the design and execution of this research project.

¹ Urbanism is empirically described by the concentration of the population of a county into towns and cities of 500 inhabitants or more.

² Socio-economic status is empirically described by county indexes of education, commerce and housing.

³ The Rocky Mountain West as delineated for this study consists of seventy-nine contiguous counties in Colorado, Idaho, Montana, Washington and Wyoming, roughly approximating the physiography of the principal ranges of the Rocky Mountains.

⁴ Almost all data employed in the study were

The research included the following procedures, which have not been extensively utilized in analyzing the demographic characteristics of population aggregates as small as the county: (1) As compared to studies that consider the relationships of social and demographic characteristics either for a group of states or for all counties of a particular state, the relationships of these phenomena were considered for a group of contiguous counties whose cultural homogeneity and physiographic similarity transcend state boundaries. Hence, a social area rather than a political area was studied. (2) The standardized birth rate, a refined measure of fertility, was calculated for the population of each county. (3) The standardized death rate, a sensitive measure of mortality, was used to describe the general mortality of the population of each county.

The research provided an opportunity to examine the fertility and mortality of the population of an area that has many distinctive social and demographic features. The Rocky Mountain West is sparsely inhabited, whereas most demographic research has been confined to either highly urban populations or to areas with comparatively high population densities. The inhabitants are predominantly native and white. The proportion of adult males is unusually large. There is comparatively little industrial activity. Much of the economic activity requires only seasonal labor. There is relatively little subsistence agriculture. The labor force in the towns and cities is engaged principally

taken from reports of the Bureau of the Census, particularly from the several volumes of the *Sixteenth Census of the United States* (1940) and from the reports of the Office of Vital Statistics of the United States Public Health Service (1939-40). A study of the demographic characteristics prior to World War II was preferred to a later period, inasmuch as it is believed that the population type existing before the war was more stable, and to a greater extent reflected the social and economic characteristics of the area.

in commercial pursuits, rather than industrial, governmental or transportation activities. The population lives in comparative isolation from direct contact with many of the facets of the mass society.

These distinctive features of the Rocky Mountain West are manifestations of two important social characteristics. First, there are no large cities in the area. Second, the pattern of division of labor is less complex than that of many other sections of the nation.

THE HYPOTHESES

It has long been recognized by demographers that the fertility and mortality of different populations are influenced by the extent of urbanism and socio-economic status.⁵ Demographic theory now contains a substantial number of propositions relating these variables to fertility and mortality for many populations that have been studied at various times and at different stages of development. However, since differential fertility and mortality have not yet been considered for a population type represented by the inhabitants of the Rocky Mountain West in 1940, it was the purpose of this study to examine the relationships of these variables to urbanism and socio-economic status in the counties of the area by testing four hypotheses. (1) The greater the urbanism the lower the fertility. (2) The greater the urbanism the lower the mortality.⁶ (3) The higher the

⁵ There are, of course, other factors independent of urbanism and socio-economic status that influence fertility and mortality.

⁶ The formulation of the hypothesis of inverse relationship between urbanism and mortality in the face of contradictory findings in other studies was justified on the basis of the peculiar character of urbanism in the Rocky Mountain West. (See, for example, Homer Hitt and Alvin L. Bertrand, "Rural-Urban Differences in Mortality," *Social Aspects of Hospital Planning in Louisiana*, Baton Rouge: Louisiana Agricultural Experiment Station, 1947, pp. 1-20; Great Britain, Registrar General, *The Registrar General's Decennial Supplement, England and Wales*, 1931, Part I, London: H.M.S.O., 1936, pp. 45-47; Louis I. Dublin, Alfred Lotka, and Mortimer Spiegelman, *Length of Life*, New York: Ronald Press, 1949, p. 72; Harold F. Dorn, *Differentials in Rural-Urban Fertility in Ohio*, 1930, Madison: University of Wisconsin Press, 1933, pp. 90-115; *Vital Statistics Rates in the United States, 1900-1940*, Washington: Bureau of the Census, 1943, pp. 198, 205; E. Foudray and T. N. E.

level of socio-economic status the lower the fertility. (4) The higher the level of socio-economic status the lower the mortality.

THE INDEPENDENT VARIABLES

The Index of Urbanism. The phenomenon of urban residence has been defined by the Bureau of the Census as an arbitrary population aggregate which is incorporated to form a city. However, urbanism is better understood as a gradual progression ranging from residence in an ideal type folk community to residence in an ideal type urban community.⁷

While the measure of urbanism used in the study is based solely upon variations in the extent to which the populations of the counties reside in towns and cities, it implicitly takes into account the social and psychological factors that make urbanism a way of life.⁸ Urbanism as a way of life finds maximum expression in the large city. Yet, as Wirth has noted, through mass communication and direct contact, many of the social and psychological facets of urbanism may be diffused to isolated and rural populations.⁹ Urbanism as a way of life is not confined to cities, but is evident wherever the influences of the city are felt. Thus, even in an area such as the Rocky Mountain West whose counties contain no large cities, the population is influenced to some degree by the social and psychological aspects of urbanism.

In the Rocky Mountain West in 1940 only twenty-six of the seventy-nine counties

Greville, "United States Abridged Life Tables, 1939, Urban and Rural, by Regions, Color and Sex," Washington: Bureau of the Census, June 23, 1943.) The physical plant of the city in this section of the nation is quite different from that found in certain other sections. In the Rocky Mountain West the city is small and almost entirely lacking in large industrial installations. Its functions are essentially commercial. As compared to certain other areas, its population probably lives in a more healthful environment. Consequently, because of the unusual nature of the city and urban life in the Rocky Mountain West, it was hypothesized that mortality in this area would be inversely related to urbanism.

⁷ Robert Redfield, "The Folk Society," *American Journal of Sociology*, 52 (January, 1947), pp. 293-294.

⁸ Louis Wirth, "Urbanism as a Way of Life," *American Journal of Sociology*, 44 (July, 1938), pp. 4-5.

⁹ *Ibid.*, pp. 5-7.

contained urban population aggregates according to the definition used by the Bureau of the Census. Recognizing that urbanism tends to increase with a greater portion of the population of a county living in towns and cities of various sizes, Queen and Carpenter have devised for county populations an Index of Urbanism that is based upon the arithmetic mean of the per cent of the inhabitants residing in communities of ten population categories ranging from 500 to 500,000.¹⁰

Using the technique developed by Queen and Carpenter, the Index of Urbanism was calculated for each of the seventy-nine counties comprising the Rocky Mountain West. The most populous county had 53,207 inhabitants in 1940 and contained the largest city, whose population was 37,081. This county had the highest Index of Urbanism, 42.5.¹¹ Six counties had an Index of Urbanism of 0 and seventy-four less than 25.0.¹² The limited range of the Index of Urbanism for the counties reflects the relatively low urbanism of the area.

The Index of Socio-Economic Status. An Index of Socio-Economic Status was devised to determine the relative differences in socio-economic level among the counties of the Rocky Mountain West. It was constructed by using the simple average of the following three indicators of socio-economic status: (1) per cent of the population 25 years of age and over who have completed high school, 1939; (2) per capita retail sales, 1939; and (3) per cent of households reporting radio, 1940.¹³

In computing the Index of Socio-Economic

¹⁰ Stuart A. Queen and David B. Carpenter, *The American City*, New York: McGraw-Hill, 1953, pp. 29-33.

¹¹ The Index of Urbanism has a possible range of 0 to 100.

¹² By comparison, the Index of Urbanism (1940) for Cook County, Illinois (Chicago) is 91.4, and that for Denver County, Colorado (Denver) is 90.0.

¹³ A coefficient of correlation of +.45 obtained between per cent of the population 25 years of age and over who have completed high school and per capita retail sales; a coefficient of correlation of +.24 between per cent of the population 25 years of age and over who have completed high school and per cent of households reporting radio; and a coefficient of correlation of +.51 between per capita retail sales and per cent of households reporting radio.

Status the three components were standardized to their respective ranges for the counties of the Rocky Mountain West.¹⁴ Thus, the index values were relative rather than absolute measures of socio-economic status. They indicated the positions of the individual counties only in relation to the counties comprising the delineated area, and not in relation to any norm or accepted standard. The highest Index of Socio-Economic Status for a county was 84.0 and the lowest 6.1.¹⁵ Fifty-one of the counties had an Index of Socio-Economic Status of less than 50.0, thereby suggesting the relatively low level of socio-economic status that characterizes the population of the Rocky Mountain West.¹⁶

THE DEPENDENT VARIABLES

Because crude or unrefined measures of fertility and mortality are unreliable indexes due to variations in the age and sex composition of the population, comparisons of fertility and mortality among the counties could not be justified until either corrections were made for these variations or allowances for their effects. To overcome difficulties caused by variations in age and sex composition, standardized birth rates and standardized death rates were employed, using the white population of the United States in 1940 as the standard population.

A standardized birth rate measuring the number of births per one thousand population, standardized for age and sex, was com-

¹⁴ The three components of the Index of Socio-Economic Status were standardized to a range of 0 to 100 through the conversion of each of the crude measures according to the following equation: $s = x(r - o)$ where s = standardized score; o = lower limit for each component; r = measure for a particular county for each component; and $x = 100/range of the measure$. (See Eshref Shevky and Wendell Bell, *Social Area Analysis*, Stanford: Stanford University Press, 1955, pp. 67-68.)

¹⁵ In contrast, the Index of Socio-Economic Status (1939-40), computed on the standardized range for the counties of the Rocky Mountain West is 105.3 for Cook County, Illinois (Chicago) and 97.2 for Denver County, Colorado (Denver).

¹⁶ A coefficient of correlation of +.65 obtained between the Index of Urbanism and the Index of Socio-Economic Status for the seventy-nine counties of the Rocky Mountain West, indicating that the anticipated direct relationship prevails between these two measures.

puted for each county of the area.¹⁷ The index of general mortality employed in the study was the standardized death rate, which was computed for the population of each of the counties. This index measures the number of deaths per one thousand population, standardized for age. The infant mortality rate, the second measure of mortality, was calculated for each county. The infant mortality rate measures the number of deaths of infants under the one year of age in relation to each one thousand births (exclusive of stillbirths) in the course of a year.¹⁸

THE TECHNIQUES OF ANALYSIS

To determine the relationships of fertility and mortality to urbanism, the Index of Urbanism was divided into "high" and "low" segments by cutting the distribution at the median score. The county Index of Urbanism scores were then cross-tabulated with the standardized birth rates, standardized death rates, and infant mortality rates of the counties. Weighted standardized birth rates, standardized death rates, and infant mortality rates were then computed for the counties in each group, based upon the relative population sizes of the counties in each group. In like manner, the Index of Socio-Economic Status scores were cross-tabulated with each of the dependent variables and weighted

¹⁷ While the standardized birth rate was the index of fertility used in this study, another measure of fertility was available for each county. The Bureau of the Census has estimated the net reproduction rate of the white population of each county of the United States for the period April, 1935 to April, 1940. ("Estimated Net Reproduction Rates for the White Population, by Counties: April, 1935 to April, 1940," *Current Population Reports*, Series P-20, No. 29, Bureau of the Census, Washington, 1950.) These net reproduction rates were not employed as the index of fertility in this study because they were computed from data covering a time span during which it is believed that the pattern of fertility was somewhat different from that prevailing during the period 1939-40. Nevertheless, it is of interest to note that a coefficient of correlation of +.68 obtained between the net reproduction rates and the standardized birth rates for the counties of the Rocky Mountain West, thus indicating a substantial direct relationship between these two measures of fertility.

¹⁸ A coefficient of correlation of +.32 held between the standardized death rate and the infant mortality rate, indicating that there was a direct relationship between the two measures of mortality.

TABLE 1. INDEX OF URBANISM BY VITAL RATES

	Index of Urbanism	
	Low *	High †
Standardized birth rate	19.6	17.3
Standardized death rate	14.2	14.8
Infant mortality rate	46.4	53.9

* Index of Urbanism scores ranging from 0 to 7.5.

† Index of Urbanism scores ranging from 7.6 to 42.5.

standardized birth rates, standardized death rates, and infant mortality rates were then computed for the counties in each group. The rates thus obtained by cross-tabulation of the Index of Urbanism with the measures of fertility and mortality are shown in Table 1, while Table 2 shows the rates resulting from the cross-tabulation with the Index of Socio-Economic Status.

Recognizing that the simple cross-tabulations might reflect spurious relationships resulting from a correlation between urbanism and socio-economic status, the "high" and the "low" segments of the Index of Urbanism and the Index of Socio-Economic Status were simultaneously cross-tabulated with each of the dependent variables. Weighted standardized birth rates, standardized death rates and infant mortality rates, based upon the relative sizes of the populations of the counties in each group, were then computed. The rates thus obtained are shown in Table 3.

THE FINDINGS

Analysis of the data resulted in the following findings:

1. An inverse relationship obtained between urbanism and fertility, thus supporting

TABLE 2. INDEX OF SOCIO-ECONOMIC STATUS BY VITAL RATES

	Index of Socio-Economic Status	
	Low *	High †
Standardized birth rate	19.5	16.8
Standardized death rate	14.4	14.9
Infant mortality rate	59.5	46.2

* Index of Socio-Economic Status scores ranging from 6.1 to 44.9.

† Index of Socio-Economic Status scores ranging from 45.0 to 84.0.

the first hypothesis. When the influence of socio-economic status was simultaneously introduced, the inverse relationship continued but was reduced for that portion of the counties with low socio-economic status and exaggerated for that portion of the counties with high socio-economic status.

2. A direct relationship was observed be-

consideration of socio-economic status reflected an increase in the magnitude of the direct relationship for those counties with low socio-economic status.

4. The third hypothesis was verified inasmuch as an inverse relationship was observed between socio-economic status and fertility. The degree of inverse relationship decreased for the counties with low urbanism when urbanism was simultaneously related to socio-economic status and fertility.

5. The resulting direct relationship between socio-economic status and mortality as determined by the standardized death rate was contrary to the fourth hypothesis. This relationship continued when the factor of urbanism was simultaneously considered with socio-economic status and mortality.

6. The inverse relationship that obtained between socio-economic status and mortality as measured by the infant mortality rate supported the fourth hypothesis. The degree of inverse relationship was reduced for those counties with low urbanism and increased for the counties with high urbanism when the effect of urbanism upon the relationship of socio-economic status and mortality was considered.

Although analysis of the data failed to support three of the hypotheses, the findings are consistent with most of the empirical investigations that have considered the relationships of urbanism and socio-economic status to fertility and mortality, with the single exception of the observed direct relationship between socio-economic status and mortality as measured by the standardized death rate. It may therefore be concluded that, despite the unique aspects of urbanism and socio-economic status for the counties comprising the Rocky Mountain West, the relationships of these elements to fertility and mortality are almost identical to those observed for other population types.

* Index of Socio-Economic Status scores ranging from 6.1 to 44.9.

† Index of Socio-Economic Status scores ranging from 45.0 to 84.0.

‡ Index of Urbanism scores ranging from 0 to 7.5.

§ Index of Urbanism scores ranging from 7.6 to 42.5.

tween urbanism and mortality as measured by the standardized death rate, thus failing to support the second hypothesis. When the influence of socio-economic status was simultaneously introduced, the direct relationship persisted.

3. The direct relationship that held between urbanism and mortality as measured by the infant mortality rate failed to support the second hypothesis.¹⁹ Simultaneous

¹⁹ The hypothesis was supported for the highly rural counties of southwestern Colorado, which contain substantial Spanish-American populations. Nine of the ten counties reporting an infant mortality rate in excess of 75.0 are located in this area. For an excellent discussion of the cultural barriers that make difficult the acceptance and

utilization of medical care by the Spanish-American population see Lyle Saunders, *Cultural Differences in Medical Care*, New York: Russell Sage Foundation, 1954, pp. 141-142.

COMMUNITY WITHIN A COMMUNITY: THE PROFESSIONS *

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THIS paper is concerned with a little explored area of social theory: the structural strains and supports between a contained community and the larger society of which it is a part and on which it is dependent. Presumably, the body of theory used for analyzing a community must be translated, qualified, or changed when that community exists within a larger society. Examples of such communities are fraternal orders such as the Masons, secret or extreme political parties, ethnic islands whether rural or urban, organized political or economic interest groups, or a specific profession such as medicine.¹

From a broad inquiry into such structural relations between the contained community and the larger one, it may later be possible to derive important hypotheses about the forces that maintain both of them. The community studied is the professional community, which is different in important respects from the other examples.² Only two sets of

links have been chosen for exploration: (1) socialization and social control, and (2) client choice or evaluation of the professional.

Characteristic of each of the established professions, and a goal of each aspiring occupation, is the "community of profession." Each profession is a community without physical locus and, like other communities with heavy in-migration, one whose founding fathers are linked only rarely by blood with the present generation. It may nevertheless be called a community by virtue of these characteristics: (1) Its members are bound by a sense of identity. (2) Once in it, few leave, so that it is a terminal or continuing status for the most part.³ (3) Its members share values in common. (4) Its role definitions *vis-à-vis* both members and non-members are agreed upon and are the same for all members. (5) Within the areas of communal action there is a common language, which is understood only partially by outsiders. (6) The Community has power over its members. (7) Its limits are reasonably clear, though they are not physical and geographical, but social. (8) Though it does not produce the next generation biologically, it does so socially through its control over the selection of professional trainees, and through its training processes it sends these recruits through an adult socialization process. Of course, professions vary in the degree to which they are communities, and it is not novel to view them as such.⁴

* Paper read at the annual meeting of the Eastern Sociological Society, March, 1956. Morris Zelditch has given various helpful comments to the author.

¹ See, for example, Georg Simmel, "The Secret and the Secret Society," in *The Sociology of Georg Simmel*, translated by Kurt Wolff, Glencoe: The Free Press, 1950, pp. 307-379; William F. Whyte, *Street Corner Society*, Chicago: University of Chicago, 1943; Louis Kriesberg, "National Security and Conduct in the Steel Gray Market," *Social Forces*, 34 (March, 1956), pp. 268-277, and "Customer versus Colleague Ties Among Retail Furriers," *Journal of Retailing*, 29-30 (Winter, 1954-5), pp. 173-176; *The Executive Life*, ed. Fortune, Garden City: Doubleday, 1956; Allan W. Eister, "The Oxford Group Movement," *Sociology and Social Research*, 34 (November, 1949); David Riesman, "Some Informal Notes on American Churches and Sects," *Confluence*, 4 (July, 1955), pp. 127-159; Paula Brown, "Bureaucracy in a Government Laboratory," Institute of Industrial Relations Reprint No. 36, Los Angeles: University of California, 1954; etc.

² Other areas are analyzed in William J. Goode, Robert K. Merton, and Mary Jean Huntington, *The Professions in Modern Society*, New York: Russell Sage Foundation, 1957 (in press).

³ But see the qualifications stated by Albert J. Reiss, "Occupational Mobility of Professional Workers," *American Sociological Review*, 20 (December, 1955), pp. 693-700.

⁴ See the extended discussion of "Discipline," p. 394 ff. in A. M. Carr-Saunders and P. A. Wilson, *The Professions*, Oxford: Clarendon, 1933; Morris L. Cogan, "Toward a Definition of Profession," *Harvard Educational Review*, 23 (Winter, 1953), p. 35; Roscoe Pound, *The Lawyer from Antiquity to Modern Times*, St. Paul: West, 1953, pp. 4-10; Abraham Flexner, "Is Social Work a Profession?" *School and Society*, 1 (1915), pp. 901-911; Louis D. Brandeis, *Business—A Profession*, Boston: Small,

The elite of any profession are usually conscious of a communal identity. Indeed, the elite of an occupation aspiring to professional status may prematurely lay claim to belonging to a community.⁵ Both the correct and the incorrect claims deserve sociological attention. First, it is likely that in speeches and essays directed to fellow members of the arrived or of the aspiring profession, no themes are so common as the ideal of service and the community of profession. Second, when such ideals are asserted as injunctions, goals, or descriptions of fact, they become justifications for many policies and subsidiary goals. Third, if indeed there is a positive response of the supposed community to such ideals, that response becomes at once an index of the power of the community and a means for furthering the goals of the community.

Consequently, it is likely that as the profession comes into being, or as an occupation begins to approach the pole of professionalism, it begins to take on the traits of a community. If a containing society becomes industrialized, it depends increasingly upon professional skills. The United States is probably typical of industrialized societies, in that its occupational life is coming to be characterized by professionalism, whose essence is the "community of occupation." To select only two facts which reflect this change: There is a higher number of professionals per 100,000 population (859 in 1870 to 3,310 in 1950, with little change in the older professions), and a growing number of occupations that aspire to professional status.⁶

Many of the traits that make the professions sociologically interesting grow from the dimension of community. Typically a profession, through its association and its mem-

Maynard, 1914, p. 2; Robert D. Leigh, *The Public Library in the United States*, New York: Columbia University Press, 1950, pp. 186-189.

⁵ See, for example, the self-analyses in the professional journals of nursing, social work, librarianship, vocational counseling, school teaching, administration, business management, etc.

⁶ Alba M. Edwards *Comparative Occupation Statistics for the United States, 1870-1940*, Washington, D. C.: U.S.G.P.O., 1943, pp. 91, 11, 178-179; *U. S. Census of Population: 1950*, Vol. II, *Characteristics of Population*, Part 1, p. 3, and p. 261. See also Edwards' discussion of "Comparability."

bers, controls admission to training and requires far more education from its trainees than the containing community demands. Although the occupational behavior of members is regulated by law, the professional community exacts a higher standard of behavior than does the law. Both of the foregoing characteristics allow the professions to enjoy more prestige from the containing community than can other occupations. Thus, professionals stand at the apex of prestige in the occupational system.⁷ Because of the controls over entrance and over professional behavior, and the possession of a monopoly of particular skills, the professional communities obtain incomes higher than those of other occupations.⁸ Moreover, since each professional community has a monopoly over its skills, it must be consulted by the containing community and thus the professions generally hold a disproportionate share of seats in state and national legislative houses, on boards of directors, on advisory and technical commissions, and so on.⁹ Little legislation relating to any profession is passed without being largely shaped by that profession. (In this society, at least, one cannot speak of the powerless professions.)

"Community" alone would not give so much power, of course, but each community of practitioners also demands high edu-

⁷ *National Opinions on Occupations*, NORC, University of Denver, 1947, pp. 15-17. Interestingly, most professionals feel that their prestige is not high.

⁸ Milton Friedman and Simon Kuznets, *Income from Independent Professional Practice*, New York: National Bureau of Economic Research, 1945, Ch. 3; George J. Stigler, *Employment and Compensation in Education*, New York: National Bureau of Economic Research, Occasional Paper No. 33, 1950, Tables 34, 36.

⁹ P. A. Sorokin, "Leaders of Labor and Radical Movements in the United States and Foreign Countries," *American Journal of Sociology*, 33 (November, 1927), p. 399; see also *inter alia* Hans D. Mauksch, *The Social and Political Background of the Members of the Seventy-sixth United States Congress*, M.A. Thesis, University of Chicago, 1951, pp. 102-103; John Brown Mason, "Lawyers in the 71st to 75th Congress: Their Legal Education and Experience," *Rocky Mountain Law Review*, 10 (December, 1944), p. 44; etc. See also Jack N. Lott and Robert H. Coray, *Law in Medical and Dental Practice*, Chicago: Foundation Press, 1942, Ch. VI. A common career pattern of the successful professional is to become increasingly involved in administrative and advisory affairs.

cation of its members. This education is evaluated by the larger society as crucial in both individual and societal matters: disease and death, liberty and property, the problem of evil, construction and production, war, and so on. It is this last factor, the values of the larger society, in interaction with the prior two, which gives rise to the power of the professional community. No such power would be given, however, if there were not a professional community to demand it and be responsible for its use. As a consequence of the rewards given by the larger society, the community of profession can also demand higher talent in its recruits and require that they go through a considerable adult socialization process.

The advantages enjoyed by professionals thus rest on evaluations made by the larger society, for the professional community could not grant these advantages to itself. That is, they represent structured relations between the larger society and the professional community.

SOCIALIZATION AND SOCIAL CONTROL

Socialization and social control in the professions are made important by the peculiarly exploitative opportunities the professions enjoy. The problems brought to the professional are usually those the client cannot solve, and only the professional can solve. The client does not usually choose his professional by a measurable criterion of competence, and after the work is done, the client is not usually competent to judge if it was properly done.¹⁰ In the face of these opportunities to exploit the larger society, the

¹⁰ As to adequacy of performance, each profession has its version of "copping a lesser plea," by which the professional convinces his client and, perhaps, himself that the professional work was well done, even if the result is not satisfactory. Cf. Oswald C. Hering, "The Architect and His Clients," *The American Architect*, 96 (October 13, 1909), pp. 141, 143; Joseph Hudnut, "Confessions of an Architect," *Journal of American Institute of Architecture*, 14 (August, 1950), p. 109; Lee R. Steiner, *Where Do People Take Their Troubles*, Boston: Houghton Mifflin, 1945; Oswald Hall, *The Informal Organization of Medical Practice in an American City*, unpublished Ph.D. dissertation, University of Chicago, 1944, pp. 114-115; and Josephine J. Williams, "Patients and Prejudice: Lay Attitudes Toward Women Physicians," *American Journal of Sociology*, 51 (January, 1946), p. 285.

professional community is nevertheless given considerable discretion and power.

Indeed, the very great prestige of the professions is a response of the society to their apparent self-denial, i.e., they can, but typically do not, exploit. This is not to say that professionals are nobler than lay citizens. Instead, the professional community holds that exploitation would inevitably lower the prestige of the professional community and subject it to stricter lay controls. It is at least clear that if individual clients believed that their practitioners were seeking to exploit them, they would not trust them so far as they do. More fundamentally, as in any other community, the highest rewards of prestige and money are most likely to be granted to the practitioners who actually live up to the professional role obligations. The practitioner who tried to live by the doctrine of *caveat emptor* might, unlike the business man, find himself expelled from his community, either informally or formally.

These larger forces operating on the two communities are implemented by the specific role definitions of the professional *vis-à-vis* his client. This means, in turn, that to the extent that community of profession is strong, its members face real temptations, and its behavioral demands are different from the demands of the lay world—to that extent it must put its recruits through a set of adult socialization processes and maintain procedures for continuing social controls over the practicing professional. Three professions—the clergy, the military, and medicine—almost isolate their recruits from important lay contacts for several years, furnish new ego ideals and reference groups, impress upon the recruit his absolute social dependence upon the profession for his further advancement, and punish him for inappropriate attitudes or behavior.¹¹ This socialization

¹¹ For various aspects of this adult socialization process, see Lawrence S. Kubie, "Some Unsolved Problems of the Scientific Career," Part II, *American Scientist*, 42 (January, 1954), pp. 105-106, 112; William Osler, "The Master-Word in Medicine," *Aequanimitas*, Philadelphia: Blakiston, 1926, p. 379; Mary Jean Huntington, "The Development of a Professional Self-Image Among Medical Students," in *The Student Physician*, edited by Robert K. Merton, forthcoming; and Howard S. Becker and James W. Carper, "The Development of Identification with an Occupation," *American Journal of Sociology*, 61 (January, 1956), pp. 291-292.

cannot be so complete as that of the child in the lay world, but that is not necessary, for the values of the professional community do not differ drastically from those of the larger society.

Social controls buttress the effects of socialization, and here again the larger society and the professional community interact in a complex way. There is probably a correlation between the degree of community of the profession and the extent of difference between the values of the practitioners and those of the larger society or of clients. However, in its bid for respect from the larger society, the professional community must justify each provision in its code of ethics or etiquette by invoking ethical notions that are also accepted by the larger society, even when certain provisions seem to the lay eye at least potentially exploitative. As an additional complexity, the client may be only partially aware of the provisions that guard him, and is himself not bound to do much in order to be protected by them. It is the professional who must abide by them.

Corresponding to these potential strains, the "working codes" of ethics—written or unwritten—largely define appropriate professional behavior with respect to four categories of people: the larger community, fellow practitioners, unauthorized practitioners, and clients. The lawyer must control his own client in court. The physician must not refer a patient to an unauthorized practitioner, and the professional community puts pressure on the lay society to enforce legislation against the unauthorized. Obviously, codes can demand conformity from only one of these, professional colleagues. On the other hand, colleagues control each other's behavior with respect to the other categories.

In turn *each* of the four categories of persons possesses some measures of social control: the larger community through the legal agencies of the state; the client through his choice or rejection of the professional; the professional community, or colleagues, through their control over prestige and career advancement, as well as over the legal agencies of the state, such as licensing boards; and unauthorized practitioners by offering services to clients who are not satisfied with the profession.

But professions vary in the degree to which

they rely upon one of these controls rather than another. None seems to rely greatly upon state control agencies, which in any event are largely staffed by professionals. The professional community exercises less control itself, when *client* economic controls are based on criteria that are accepted by the profession. Indeed, the professional group requires its control over its own members precisely *because* its judgments do not coincide generally with those of clients. As a consequence, its members *need* the protection of the professional community and will submit to its demands. A negative case is engineering, where the client is usually experienced, has mainly a contractual relationship with his engineer, and demands from the engineer what the profession itself would demand. As a result, compared with other professions, the engineering community has relatively less control over individual members. At the other extreme are professions dealing in human relations, such as the clergy or medicine, where the client is thought to be a poor judge of the professional product. Consequently, his choices would not reflect the judgment of the professional community, and the latter exercises strong moral control over the practitioner. The unauthorized practitioner is most successful where the profession has poor technical control over a given problem.

Bureaucracy opens a further range of structural relationships. The professional who is also a bureaucrat becomes less *directly* dependent on the professional community for his career advancement, so that the ordinary sanctions of that community may have less impact. Nevertheless, the bureaucracy usually hires, fires, or advances him upon the advice of peer or superior professionals, who in turn may feel themselves to be part of the professional community. Correlatively, the bureaucracy makes and enforces rules for the professional, and thus becomes—like the professional community from which it derived most of those rules—a responsible control agent for the larger society. In turn, of course, the professional community is responsible to the bureaucracy for proper staffing.

By way of compensation, the professional community offers two main kinds of protection to its members. It protects the pro-

fessional against client or lay community charges that it considers inappropriate or irrelevant. For example, as Hughes has noted, it takes a statistical view of professional errors of judgment.¹² It also offers advantages to those who are part of this community, by structuring professional practice so that the insiders will generally fare better than outsiders, in spite of erroneous judgments that clients tend to make about professionals.¹³ Thus, in exchange for protection against the larger lay society, the professional accepts the social control of the professional community.

As a consequence, the larger society has obtained an *indirect* social control by yielding *direct* social control to the professional community, which thus can make judgments according to its own norms. As a corollary, the normative structure of the professional community is reinforced, while this community can avoid the loss of prestige that non-punishment of offenders would eventually cause. Professionals assert this relationship in their literature, and claim that their community is judged in lay society by their worst members. Moreover, they frequently argue that the most effective technique for avoiding lay control over the professional community is to maintain strong control over its members. Thus it is that the social control of the professional community over its members may be seen as a response to the threat of the larger lay society to control it. Failure to discipline would mean both a loss of prestige in the society, and a loss of community autonomy.

CLIENT CHOICE AND PUBLIC RANKINGS

Client choices are a form of social control. They determine the survival of a profession or a specialty, as well as the career success of particular professionals. In turn, these

¹² Everett C. Hughes, "Mistakes at Work," *Canadian Journal of Economics and Political Science*, 17 (August, 1951), pp. 320-327.

¹³ An excellent analysis of this pattern in a well-controlled profession is that of Oswald Hall. See *op. cit.* and his "The Informal Organization of the Medical Profession," *Canadian Journal of Economics and Political Science*, 12 (February, 1946), pp. 30-44, and "The Stages of a Medical Career," *American Journal of Sociology*, 53 (March, 1948), pp. 327-336.

choices determine the kind of professional help the society gets.

Almost no client *willingly* goes to an unethical or incompetent practitioner, and clients almost always claim that their own professionals are excellent. Yet, both informally and in their literature, professionals express a generally poor opinion of these choices. But, if these are *not* wise decisions, and the professional community is the only body that is competent to judge correctly, it would seem to be a violation of the professional ideal of service not to inform the larger society of its judgments. That is, if the larger society were to gain the benefit of professional knowledge, the professional community would publish evaluations of its members. Thereby, the larger society would benefit from better professional help, and the professional community might make individual practitioners more dependent on its approval.

Of course, professions are accustomed to ratings. In numerous professional schools, students are ranked. Examinations for entrance into the professions yield rankings that are sometimes made known. There are prizes for outstanding work. Professional associations place their honored members on boards and commissions. There are continuous professional judgments of high or low achievement. To the extent that any community exists, it evaluates the behavior of its members. Professional life is so fundamentally based on achievement, that such judgments of rank are made constantly. Indeed, rankings within the profession are a mode of social control.

However, such data are not generally available to the public, and are not widely known, even when not secret. The professional community will not rank its members for the larger society; and the latter cannot do so. In fact, the existing intra-professional evaluations create hostilities within the community, and the limitless challenge of professional life, for instance in the sciences, creates strong anxieties. The most successful practitioner, loaded with honors, worries about his failures and ineptness. The protective walls of the professional community keep these hostilities and anxieties within bounds by defining, for a given level of age, experience, training, and type of practice,

what is a *passable* competence and achievement; and by forbidding the expression of such hostilities before the larger society. The guild asserts essentially that all, or nearly all, are colleagues, and that if reasonable allowances are made, they are all wiser in their craft than outsiders can be.¹⁴ As a corollary, these definitions protect the individual practitioner against impossible demands of the larger society, e.g., that he not make any errors in judgment, that he know all the latest discoveries and techniques, etc. Thus, colleague criticism is rarely permitted before laymen, and the professions justify the rule by asserting that such criticism would lower the standing of the profession in the larger society. A closely related sociological proposition is also offered as a justification—that such criticisms, and presumably public rankings, would weaken the ties of the professional community, while it is the strength of these ties that makes possible *any* achievements of this community. That is, it cannot achieve its other, more important, goals if it ceases to be a community.

Structurally, to evaluate *colleagues* publicly is different from evaluating *trainees*. The latter are not yet community members. That is, the very process of evaluation denies or questions status inside the community, even if the ultimate judgment is favorable. Moreover, such evaluations would have to be made continuously, so that no practitioner could be certain of his membership—yet, it is this certainty of a shared identity, a common career, that is the central element in any community. An empirical approximation of this interaction occurs when the standards for entrance are raised substantially. This is, in effect, an announcement to the public that certain older members of the professional community have not been adequately trained. However, allegiance to the professional collectivity outweighs the service obligation to the public, and "grandfather clauses" lessen the severity of that indictment.

Two further corollaries must be noted. Although public rankings might seem to increase the power of the community, in

fact they would give over social controls to the larger society. For, even if the rankings were broken down into classes of practitioners, by specialization, rural-urban location, or experience, the economic effect on those toward the bottom of *any* list would be catastrophic. The result, then, would be that the utilization of such evaluations would be in the hands of the clients or lay public—and this would be a denial of the primacy of the professional community in affairs of social control. Rankings would then have little independent potency within the community.

A final structural corollary is that each professional community would then have to make exorbitant demands on the containing society for talented recruits and increased training facilities. For if a substantial proportion of the existing practitioners are given little client support because of such rankings, then other and better professionals must be trained. If all professions were to attempt this simultaneously, competing as they do for public support and the available supply of talent, the total demands could not be met.

These structural factors in the interaction between the professional community and the larger society suggest that the evaluations, which are the daily experience of all professionals, cannot and will not be formalized and made public. On the other hand, to leave the client—whether a bureaucracy or an individual—without any guidance is to put the professional community entirely at the mercy of the untutored client. Consequently, there are community patterns and processes that give at least indirect guidance to the larger society. Among these are: (1) institutional advertising, (2) professional referrals, (3) various types of reference plans, such as the Legal Reference Plan, or the emergency medical referral system,¹⁵ (4) the informal association of specialists within physically contiguous offices, (5) formal lists and directories,¹⁶ (6) positions in bureaucracies, (7) awards and prizes, etc.

¹⁴ Note that the academic puts great stress on achievement, but insists on "equality of the colleague" even when the colleague has a lower rank.

¹⁵ Charles O. Porter, *Lawyer Reference Plans: A Manual for Local Bar Associations*, Boston: Poole Bros. for Survey of Legal Profession, 1949; and Edgar A. Schuler, Robert J. Mowitz, and Albert J. Mayer, *Medical Public Relations*, Detroit: Edwards, 1952, pp. 14 ff.

¹⁶ See the range of data in *American Architects*

These are but rough and indirect guides, but they do serve to reduce the randomness of the choices made by the larger society without weakening the essential bonds within each professional community. It does not seem likely, on the other hand, that each professional community has found, unaided, the sociologically correct point of optimum balance between these two.

Summary. The complex structural relations presented here cannot be summarized briefly. We have first noted how important

Directory, edited by George S. Koyl, New York: Bowker, 1955; *Martindale-Hubbell Law Directory*, 1956; *Medical Directory of New York State*, Vol. 46, New York: Medical Society of the State of New York, 1955; etc.

a characteristic of the profession is that of "community." Second, we have pointed out that it is like many other types of communities in that it exists within and is dependent on a larger society. Thus, theoretical notions derived from this nexus may have wider applications. Third, we have analyzed two specific sets of such relations, (1) socialization and social control, and (2) client choice and evaluation of the professional, noting the structural strains and supports of the community and the society. It is suggested here that these relations between and within the contained community and the larger society form an important, but hitherto little explored area.

THE NATURE AND STATUS OF MEDICAL SOCIOLOGY *

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THIS report is concerned with the professional affiliations and activities of 110 sociologists working in the new sub-specialty of "medical sociology" during the first half of 1956.

The study on which this report is based was suggested by a small group of medical sociologists and physicians who met informally in Washington in September, 1955 during the meetings of the American Sociological Society. The discussion centered on the desirability of establishing some channels of communication about the many developments in this area. It was agreed that medical sociologists needed some means of identifying each other and knowing the various ways in which sociologists were relating to medicine. An exchange of this type of information was felt to be vital so that patterns of activity that seemed to work well might be emulated while those involving pitfalls might be avoided in the future. It was suggested that each medical sociologist might want to develop a direct exchange of ideas and experience with others whose affiliation,

program and responsibilities were similar to his own.

In order to facilitate such an interchange of information and to meet other common needs, the informal Committee on Medical Sociology was created. This writer was designated Secretary to the Committee and was asked to undertake the compilation of a directory of medical sociologists.

The following procedures were followed. About fifteen medical sociologists known to the writer were asked to provide the names of persons who they knew were working in the field. From these suggestions, an initial list of 82 names was compiled. This list was then sent to each of the persons named along with a simple one-page questionnaire. They were asked to complete and return the questionnaire if they desired to be identified with medical sociology. They were also asked to suggest the names of persons not listed who they felt should be so identified. Eighty additional names were suggested, and these individuals were invited to complete the questionnaire. Of the 162 forms distributed, 144, or 89 per cent, had been returned by June 1, 1956. It was indicated that primary concern of the Committee would be in identi-

* Paper read at the annual meeting of the American Sociological Society, September, 1956.

fying the professional sociologists working in medicine. Thirty-four of the names submitted were those of persons with professional identifications other than sociology: physicians, anthropologists, psychologists, and social workers. They are obviously only some of the men and women in these professions whose interests extend into medical sociology, but they have been included in the directory of medical sociologists prepared by the Committee. However, only the 110 individuals whose basic professional identification is sociology are included in the following discussion.

This covers first, a description of the nature of activities in which medical sociologists are engaged as indicated by responses to the questionnaires distributed for the Committee; and second, an interpretation of these findings in terms of the status of medical sociology.

The Nature of Medical Sociology. Medical sociology is described according the five criteria: (1) the types of organization with which medical sociologists hold their basic professional affiliation, (2) the proportion of professional activity that is directly related to medical sociology, (3) the nature of function, i.e. teaching, research, or administration, (4) for teaching in medical sociology, an identification of students, (5) for research in medical sociology, an identification and categorization of types of problem and areas of investigation.

Basic Professional Affiliations. Of the 110 sociologists included in this study, 34 were affiliated with an academic medical organization. These included 20 who are employed full time at 11 different medical schools,¹ 4 who hold joint appointments between medical schools and academic departments of sociology,² 6 who are employed at 4 different Schools of Public Health,³ and 4 employed by 4 Schools of Nursing.⁴ Five sociologists held primary appointments to the staffs of

¹ Cornell (5), Upstate Medical Center, State University of New York (4), Colorado (2), Downstate Medical Center, State University of New York (2), one each at Baylor, Harvard, North Carolina, Texas, Vermont, Yeshiva, University of Washington.

² Columbia, Cornell, University of Florida, Yale.

³ Harvard (2), Michigan (2), Minnesota, Pittsburgh.

⁴ Colorado, Cornell, Boston University, Northwestern.

hospitals, 18 were working for governmental public health or mental health agencies, and 3 were on the staffs of voluntary health agencies. Altogether 60 were working with organizations having a distinct medical orientation. Of the others, 11 were with private research groups, 5 were on foundation staffs, and 34 had their primary base with an academic department of sociology or an allied field.

Extent of Function in Medical Sociology. Sixty-eight of the respondents reported that they were engaged in medical sociology on a full-time basis. All but 5 of those affiliated with medical organizations were on a full-time basis. The 42 respondents with only a part-time investment in this area included 32 whose basic affiliation is with an academic department of sociology.

Nature of Function in Medical Sociology. Fifty-seven sociologists reported that they were teaching in the broad area of medical sociology. One-hundred-and-eight are conducting research in this field. Sixteen have administrative responsibilities.

Teaching. The teaching of medical sociology includes activities ranging from complete courses to occasional lectures and is addressed to such varied groups as medical students, physicians, nurses, students of public health, university graduate students and college undergraduates.

Twenty-four sociologists have been teaching medical students at 16 different medical schools.⁵ These include 17 men who hold full-time appointments on medical school faculties, 3 whose services are borrowed from departments of sociology, and one each whose basic affiliation is in a School of Public Health, a hospital, a governmental health agency, and a research organization. There appears to be no pattern for the sociologist's teaching in a medical school. Most frequently he is participating in the teaching program of a department of preventive medicine or environmental medicine. In 4 schools he is relating to the teaching in psychiatry. At one school 4 sociologists are participating in an

⁵ Cornell (3), State University of New York Upstate (4), Colorado (2), State University of New York Downstate (2), University of Washington (2), Baylor, Harvard, North Carolina, Texas, Vermont, Yeshiva, Pittsburgh, Albany, Wayne, Western Reserve, Chicago.

interdisciplinary course called The Science of Human Behavior. This course uses curriculum time formerly assigned to the departments of public health and psychiatry in the first year. Forms of teaching include the complete course, the unit of a course, the series of lectures, incidental lectures, seminars and individual conferences. Although he approaches the problem in many different ways, in nearly all instances the sociologist is trying to provide the medical student with a broader perspective for understanding some of the social and cultural factors that may influence the etiology, or incidence, or prevalence, or course of a health problem; the response of the patient, his family, and his other social groups; or the total management of the situation. The sociologist is becoming a key contributor to the concepts of comprehensive medicine.

In addition to the teaching of medical students, 23 sociologists are teaching or participating in courses for nurses or nursing students, 12 are teaching courses or course units on medical sociology to college undergraduates, and 40 are variously involved in courses or seminars relating to some aspect of medical sociology for physicians, students of public health or other graduate students. One department of sociology (Yale) now provides a special graduate program in medical sociology.

Administration. Administrative duties reported in connection with medical sociology are primarily concerned with responsibility for research projects or programs. Three men reported administrative roles in connection with health agencies, one with a foundation, and one responsibility for a medical school teaching and research program in the social sciences.

Research. One-hundred-and-eight of the 110 respondents indicated that they were engaged in research related to medical sociology. They reported 135 different studies that are classified here into four groups.

Forty-two projects are concerned with mental illness. Twelve of these are focused primarily on the psychiatric hospital. They deal with the social structure of the hospital as a therapeutic community, and the impact of the hospitalization experience on the post-hospital adaptation of patients. Fourteen projects involve the application of behavior

theory to a better understanding of the psychotherapeutic process. Eight studies are concerned with the epidemiology of mental illness. Eight projects involve the relationship of psychiatric disorders to social structure.

Forty-two studies are primarily concerned with identifying patterns of human response to illness and delineating clinical uses for social data. Twenty of these are concerned with the medical care practices of various segments of the population and are usually restricted to particular cultural groups. They attempt to identify factors that influence the recognition of health needs and the utilization of health resources. Twenty-two projects are focused on specific diseases or disease factors (heart disease, alcoholism, leukemia, tuberculosis, aging, physical rehabilitation). These are concerned with socio-cultural factors that may be significant to the etiology, prevalence, distribution, course or management of the particular health problems.

Twenty-six sociologists reported involvement in studies of the profession of medicine. The greatest number of these dealt with the professionalization process through which the medical student becomes a physician. Others are concerned with the role of the physician, the socialization of nurses, the choice of medicine as an occupation. A few are concerned directly with the use of social science materials in medical or nursing education.

A final group of research projects, 25 in number, are concerned with the organization of medicine and with the supply, distribution, and utilization of health resources. These include 7 studies of the general hospital, several dealing with regional or community patterns of medical service, and others focusing on the family as a unit of health care.

The Status of Medical Sociology. From the foregoing summary of the nature of medical sociology, it is apparent that there is a large and varied activity in this field. The field is, however, developing and changing very rapidly, so rapidly that any attempt to describe it runs the risk of early obsolescence.

The number of medical organizations now employing sociologists suggests that the profession is fast coming to recognize a value and a need for sociological contributions.

Lest we become too confident of our demonstrated worth, it should be noted that a majority of the positions held by sociologists on medical school faculties have been supported by foundations. The Russell Sage Foundation alone has pioneered in providing funds for this purpose with the intention that sociologists be given an opportunity to explore their potential for contributing to the medical program and hopefully to demonstrate their worth. It is encouraging that so many medical schools have taken advantage of this opportunity. However, the true test will come only when these schools are faced with the decision of continuing such positions within their own budgets. Thus far, few schools have supported medical sociologists without recourse to outside funds.

A year ago we suggested a logical division of medical sociology into two categories, the sociology of medicine and sociology *in* medicine.⁶ We suggested that the sociology of medicine is concerned with studying such factors as the organizational structure, role relationships, value systems, rituals, and functions of medicine as a system of behavior and that this type of activity can best be carried out by persons operating from independent positions outside the formal medical setting. Sociology *in* medicine consists of collaborative research or teaching often involving the integration of concepts, techniques and personnel from many disciplines. We further suggested that these two types of medical sociology tend to be incompatible with each other; that the sociologist of medicine may lose objectivity if he identifies too closely with medical teaching or clinical research while the sociologist in medicine risks a good relationship if he tries to study his colleagues.

In many respects the foregoing summary of activities supports these categories. Studies of the profession and those dealing with the organization of health resources are primarily in the sociology of medicine. Teaching activities and research in which the sociologist is collaborating with the physician in studying a disease process or factors influencing the patient's response to illness are primarily

sociology *in* medicine. On the one hand the sociologist stands apart and studies medicine as an institution or behavior system; on the other hand he is collaborating with the medical specialist in trying to help him in the performance of his educational or therapeutic functions. The major exceptions to this dichotomy were a few sociologists working in the area of psychiatry, who are trying to engage in collaborative activities with psychiatrists at the same time that they are studying the way in which the psychiatrists function. These dual roles in themselves may offer an interesting experiment to students of human behavior.

Medical sociologists, as teachers, while varying greatly in the content and teaching methods they employ, do appear to hold a common objective. They are all trying to provide medical personnel with an understanding of some of the processes of behavior involved in human response to illness and thereby to facilitate a more effective and comprehensive approach to these problems.

In nearly every instance, the sociologist teaching in a medical school is engaged in group teaching with members of other disciplines. This type of teaching provides a significant challenge for both the individual and his profession. It provides a major test for the applicability of sociological content and concepts to the processes and problems of medicine and requires great flexibility and adaptability on the part of the sociologist.

In many respects the role of the medical sociologist may resemble the chameleon. Although, like the chameleon, he has a basic structure and a basic integrity that will not vary, his successful adaptation to his environment may depend on an ability to alter certain outward manifestations in accordance with his environment. In medicine, the sociologist encounters individuals who are scientists and scholars, others who are primarily practitioners, others whose major interest is education, and some who must be identified in several ways. He finds that he cannot relate to everyone in medicine on common ground. The medical scientist will usually respect and accept the terminology, the conceptual schemes and even the jargon of sociology. The practitioner, however, will often expect and demand that the sociologist recast his contributions in readily understand-

⁶ Robert Straus, "The Development of a Social Science Teaching and Research Program in a Medical Center," paper presented at the 1955 meetings of the American Sociological Society.

able terms. There is a danger in this, for if the sociologist begins to talk like a physician, he may eventually come to act like a physician and even to think like a physician. If he sacrifices his identity as a sociologist, he loses the unique contribution he can make to medicine. At the same time the sociologist who resolutely sticks to pure sociology in the face of demands for interpretation (and there is need for pure sociology in medicine at the right time and place) will be misunderstood, ignored or rejected. Often, to be

successful he must find ways of offering his content and theory so that they will be meaningful in the physician's frame of reference.

Successful adaptation for the medical sociologist may require an ability to cast his contributions in accordance with the expectations and needs of the particular medical personnel with whom he is relating. If he becomes a good chameleon, he should be able to do so without sacrificing either his integrity or his professional identification.

MOBILITY ORIENTATION AND STRATIFICATION OF 1,000 NINTH GRADERS

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IN the analysis of social mobility in an open class system, three analytically distinct and empirically discernible variants should be noted. The first of these, mobility resources, refers to those qualities and conditions conducive to upward mobility that are either ascribed to or inherent in the individual, such as economic resources or basic capacities and abilities. The second, mobility skills, refers to learned patterns of behavior and acquired attitudes and values that are instrumental to mobility, such as the deferred gratification pattern, manners, and modes of communication. The third, mobility orientation, refers to aspiration levels within the stratification system that may serve as points of motivation in competition for position in the social structure.¹

This paper is concerned primarily with the mobility orientation variable. There are two alternative interpretations of mobility orientation in American society. One assumes that mobility orientation roughly follows class lines, so that the middle and upper classes

are the strivers while the lower classes set a level of aspiration that is largely satisfied within the limits of their own stratum. This view implies that the very orientation of the lower strata prevents them from upward mobility, irrespective of the class distribution of mobility resources or skills. The other assumes that there is a somewhat similar mobility orientation throughout the stratification system, and that regardless of one's position in it, the orientation is toward commonly perceived and desired goals. This hypothesis places the emphasis upon unequal distribution of resources and skills in explaining class differences in upward mobility.²

A growing body of empirical data, obtained largely from attitude studies of adults, has been developed in support of the former hypothesis.³ Mobility aspirations have been

¹ These factors concern the individual psychologically primarily in terms of his socialization and his initial ascribed status. There are, of course, such larger, institutional conditions as class differences in birth rates and historical changes in the occupational structure, which also affect mobility chances. They represent an interesting example of social facts that may have no direct psychological impact upon the individual yet determine his mobility opportunity.

² A convenient summary and analysis of class attitudes related to mobility orientation is presented by Herbert H. Hyman in "The Value Sys-

indexed in terms of attitudes towards occupation, education, income and other such objective criteria. In the main, they tend to demonstrate that, in contrast to the middle strata, lower strata respondents seek job security and avoid risk, express more limited income expectation or striving, place less value on education and plan for less, are less certain concerning occupational goals, plan for lower occupations, and the like. Studies of youths' mobility orientation have been based primarily on orientations to the occupational hierarchy. Such studies demonstrate a high positive correlation between stratum position and level of occupational choice. This pattern is given added support by consideration of curriculum choice and educational plans, which also tend to follow stratum position.⁴

Although there is little doubt about the validity of such findings, a question is raised concerning how these data should be interpreted for purposes of mobility orientation analysis. Several objections might be raised, but for purposes of this paper one central problem should be emphasized. It is seldom clear in such research whether the stated choice represents an expectation or an aspiration; whether the individual is stating a plan based upon a realistic appraisal of his life chances or a more generally held aspiration for life goals in the stratification system.

This distinction is of particular significance in the analysis of the mobility orientation of youth. The crux of the matter lies in determining precisely what is to be inferred from their occupational choice.⁵ The focus upon youth is crucial, for if it can be demonstrated

that those in the lower class do not aspire relatively high, while those in the upper strata do, there is little reason to assume that their aspirations will be raised, as a group, in adulthood.

In order to determine more precisely the nature of occupational choice among young people, a questionnaire was designed to give students an opportunity to state both an occupational plan and an occupational aspiration. This was accomplished by first asking the student if he planned to quit high school, complete high school, or go to college. At each of these educational alternatives the student was asked: "After you (quit high school, complete high school, graduate from college) what kind of work do you intend to do?"

After this question the following statement appeared:

In the above question you have indicated what you actually plan to do. However, often times we have to plan to do things we would not do if circumstances were different. Therefore, the following question is asked. If you could do what you really wanted to do, what would you do?

It was felt that such a question, following those on plans and with the explanatory statement, would elicit a response most nearly approaching the student's occupational aspiration. This question left for the student a relatively free choice of occupation without the necessity of considering reality factors. It was presumed, on the other hand, that in answering the preceding questions the student would be taking into account reality factors as he perceived them and accounted for them in his plans. It should not follow necessarily that students' aspirations are completely devoid of reality considerations or that their plans do not contain some degree of aspiration. However, it was felt that insofar as plans and aspirations differ, they would tend to express polar points on an expectation-aspiration continuum.

In order to place the students in the stratification system, each was asked to state his father's occupation. In addition, questions were asked concerning curriculum choice and educational plans. Curriculum choice and educational planning were desirable in order to give some evidence of the validity of the

tems of Different Classes: A Social Psychological Contribution to the Analysis of Stratification," in Reinhard Bendix and Seymour Lipset, *Class, Status and Power*, Glencoe: The Free Press, 1953, pp. 426-442.

⁴ For example, see E. H. Galler, "Influence of Social Class on Children's Choices of Occupations," *Elementary School Journal*, LI (1951) and William L. Warner, Robert J. Havighurst and Martin B. Loeb, *Who Shall Be Educated?* New York: Harper & Bros., 1944, Chapter V.

⁵ Hollingshead raises this question in evaluating his finding that high school youths' vocational choices tended to follow their class position. He comments, "In short, they are either being forced to accept or they are willing to accept the vocational patterns the class system holds out to them." (August B. Hollingshead, *Elmtown's Youth*, New York: John Wiley & Sons, 1949, p. 287).

student's occupational plan. If he had selected a profession, for example, but did not indicate college preparatory curriculum or college plans, it might be assumed that his occupational "plan" was a wish rather than a goal towards which he was actively working. In addition, class comparisons might be made of the three-fold relationship between occupational, curriculum, and educational plans.

The questionnaire was submitted to 1,000 ninth grade students in four, semi-industrial, medium-sized communities in New Jersey. The schools all drew from a representative cross section of their respective communities. No one school could be designated a dominantly lower- or upper-class institution. Large, urban centers and small, rural communities were represented only insofar as these schools drew students from such peripheral areas.

The ninth grade was selected because at this age students begin to approach occupational choice with some degree of realism, occupational interest begins to stabilize, students must choose a high school curriculum and, therefore, are forced to give some consideration to occupational orientation, and this grade level is fairly representative of all strata since the dropping-out process has not yet started.⁶

The questionnaire was administered by the research group to all students simultaneously in their classrooms at each school. Students were encouraged to ask questions concerning the schedule and were answered individually during the process of completing the questionnaire. They were given as much time as they needed to complete the schedule.

The data obtained from these anonymous questionnaires were tabulated so that comparisons of plans and aspirations at occupational group levels might be made. This was accomplished by classifying the fathers' oc-

cupations and the students' occupational plans and aspirations in accordance with the six principal groups presented in the Alba Edwards scale of occupational categories: I. Professionals; II. Owners, managers, and officials; III. Clerks and kindred workers; IV. Skilled workers and foremen; V. Semi-skilled workers; VI. Unskilled workers. The Edwards scale gives a relatively adequate index of socio-economic position and at the same time allows comparison of questionnaire data with Census distributions. This permits some indication of the representativeness of the sample in terms of the fathers' occupations and of the realism of the students' occupational choices. In addition, it was anticipated that students would not be able to give detailed descriptions of specific occupations, so that the broad classifications of the Edwards scale would be methodologically suitable.

Table 1 compares the parents' occupational positions with the Edwards national and state percentage distribution of the employed working force. Generally speaking, there appears to be no great tendency for

TABLE 1. NATIONAL AND STATE PERCENTAGE DISTRIBUTIONS OF EMPLOYED WORKING FORCE BY EDWARDS OCCUPATIONAL GROUPS COMPARED WITH PARENTAL OCCUPATIONS *

	Occupational Group					
	I	II	III	IV	V	VI
Males and Females						
National	7	20	18	12	21	24
New Jersey †
Students' parents (N 1269)	5	15	12	26	26	16
Males						
National	5	25	14	15	18	23
New Jersey	7	14	19	20	24	17
Students' fathers (N 953)	4	18	9	32	22	12
Females						
National	13	5	29	1	28	25
New Jersey	11	3	32	1	37	16
Students' mothers (N 316)	7	3	20	4	39	26

* National and State data from Alba M. Edwards, "A Social-Economic Grouping of the Nation's Labor Force," in *Comparative Occupational Statistics for the United States, 1870-1940*, Part III A, *Sixteenth Census of the United States: 1940*, Washington: U. S. Government Printing Office, 1943; National data from Table XXVIII, p. 189; N. J. State data from Table XXXI, p. 194.

† Combined percentages for males and females are not presented in the Edwards data.

⁶ Two convenient surveys of literature on vocational choice are contained in H. D. Carter, *Vocational Interests and Job Orientation, A Ten Year Review*, Applied Psychological Monographs of the American Association for Applied Psychology, Palo Alto: Stanford University Press, 1944; and E. K. Strong, *Vocational Interests of Men and Women*, Palo Alto: Stanford University Press, 1943. Additional survey and discussion are found in Eli Ginsberg and associates, *Occupational Choice*, New York: Columbia University Press, 1951.

students to up-grade parental occupations or to grossly misrepresent them. Among fathers, at the state level, the most notable differences are found in occupational Groups III and IV; among mothers, in Groups III and VI. The fact that both parents are under-represented in the "clerks and kindred workers" may be explained by the fact that large, urban centers which tend to draw heavily upon these workers are not represented in the sample. At the same time, the over-representation among males in the skilled Group may be understood by the fact that the sample area, while considerably industrialized,

are considered by sex. The most notable concentration of male plans remains in Group I. However, Groups II, III, IV, and V bear a more reasonable relationship to state and national distributions and to the fathers' occupational Groups. Females, on the other hand, tend to concentrate their plans in Groups I and III. This concentration tends to decrease the approximation of student plans to national and state distributions when both sexes are combined. It is clear that these students' occupational aspirations bear little resemblance to the occupational structure or to their fathers' occupational positions. However, it should be noted that actual occupational plans are more closely related to job structure, and when these are further distinguished by sex, males present the closest approximation.

The second question to be considered is whether the students' stratification position affects their plans and aspirations. A tabulation of the students' plans and aspirations by their fathers' occupational Group is given in Table 3. These data demonstrate that the students' positions do affect both their plans and aspirations. There is a progressive lowering of both as the occupational hierarchy is descended. However, it is true also that the difference between a student's occupational plan and aspiration is progressively greater down the hierarchy. The students' aspirations for professional and owner-manager occupations never fall below 54 per cent in any Group, while their plans in these occupations fall as low as 18 per cent among students in Group VI. Thus, while there is only a 2 per cent difference between plans and aspirations in these occupations among students whose fathers are in Groups I and II there is a 36 per cent difference among students whose fathers are unskilled laborers. This trend is consistent throughout the six occupational Groups. The general pattern is one in which children of fathers in the lower levels of the occupational hierarchy progressively lower their aspirations when it comes to considering plans. This relationship suggests that while there is a relatively consistent pattern of high occupational aspirations among these youths, their plans tend to conform to their position in the stratification system.

This pattern may be illustrated more pre-

TABLE 2. PERCENTAGE DISTRIBUTION OF STUDENTS' OCCUPATIONAL PLANS AND ASPIRATIONS BY EDWARDS OCCUPATIONAL GROUPS

	Occupational Group					
	I	II	III	IV	V	VI
Males and Females						
Plans (N 833)	33	7	39	11	10	2
Aspirations (N 851)	64	9	14	8	5	0
Males						
Plans (N 362)	33	16	11	24	14	3
Aspirations (N 401)	57	17	5	15	6	1
Females						
Plans (N 471)	33	1	59	1	6	1
Aspirations (N 450)	70	2	22	2	5	0

contains no large, heavy industries which might contribute larger percentages to semi-skilled and unskilled occupations. For the females, occupational opportunities in the smaller communities may well tend to concentrate in the lower occupational groups, hence their over-representation in unskilled occupations.

The first question raised in considering these data is whether or not students distinguish plans from aspirations. Table 2 presents the distribution of students' plans and aspirations in accordance with the Edwards occupational Groups. These data clearly indicate that students do distinguish plans from aspirations since, although 73 per cent of the students elect Group I and II aspirations, only 40 per cent plan for such occupations. Conversely, only 5 per cent aspire to occupations in the lower two Groups, while 12 per cent plan for them. These differences are further distinguished when choices

TABLE 3. PERCENTAGE DISTRIBUTION OF STUDENTS' OCCUPATIONAL PLANS AND ASPIRATIONS BY FATHERS' OCCUPATIONAL GROUPS

N	Father's Group	Occupational Plans							Occupational Aspirations									
		I	II	III	IV	V	VI	DK	NA	I	II	III	IV	V	VI	M	DK	NA
41	I	76	5	7	0	0	0	7	5	76	7	7	3	0	0	0	5	3
179	II	34	25	22	3	2	0	12	2	53	18	8	3	1	0	2	8	6
78	III	44	1	30	8	4	0	12	3	59	4	13	6	3	0	3	5	8
320	IV	24	2	39	13	8	1	13	1	52	4	15	10	4	0	3	6	6
220	V	18	1	35	9	12	2	16	7	57	6	10	7	7	1	1	6	6
115	VI	17	1	34	9	15	5	16	4	45	9	14	5	9	0	1	6	11
47	MW	23	0	34	13	13	0	11	6	57	0	8	6	6	0	6	9	6
1000	Total	27	6	32	9	8	1	13	4	54	7	12	7	5	0	2	7	7

DK—Don't know.

NA—No answer.

M—Marriage.

MW—Mother sole support of family (mother works).

cisely by an analysis at each Group level of students whose plans and aspirations are the same, whose plans are lower than aspirations, and whose plans are higher than aspirations. These data, presented in Table 4,

TABLE 4. PERCENTAGE DISTRIBUTION OF PLANS RELATED TO ASPIRATIONS AT EACH GROUP LEVEL

N	Father's Group	Aspi- ra-tions and Plans Equal	Plans Lower Than Aspi- ra-tions	Plan Higher Than Aspi- ra-tions
35	I	91	3	6
132	II	66	23	6
60	III	68	27	5
241	IV	57	48	5
160	V	39	53	8
79	VI	43	51	6
707	Total	56	38	6

include only students who state both an occupational plan and aspiration. It is clear that the upper-class students' plans most nearly approximate their aspirations and that they lower their aspirations least when considering plans.

Because of sex differences in occupational orientation noted in Table 1, a separate tabulation was run on males and females. Since the same general relationship between Group position and occupational choices obtained and because of space limitation, these data are not presented in detail. However, some pertinent sex differences should be noted. Group I males planned only for Group I

and II occupations. Some males in each of the lower three occupational Groups planned for Group VI occupations, and in no case in these Groups were Group I and II plans selected more frequently than the other occupations. Actually, the males in the lower three Groups planned more for skilled and semi-skilled occupations than for professional or business roles. On the other hand, males in the upper three Groups planned more for business and the professions than for all the other occupations combined. The females of all Groups tended to concentrate their plans in Groups I and III, but there was a decided downward trend in Group I choices as the occupational scale is descended. Sixty-two per cent of both males and females aspired to Group I and II occupations, but females in all Groups aspired more to Group I occupations than males.

Both the curriculum choices and the educational plans of the students conform to their occupational plans (see Table 5 and comparison with occupational planning in Table 3). In all occupational Groups except VI, Group I occupational plans are supported by college plans, and there is only a 2 per cent disparity among Group VI students. Group differences range from 90 per cent college plans among Group I students to 15 per cent among Group VI. The curriculum choices support Group I plans to an even greater degree. College preparatory courses are chosen in excess of college plans in all occupational Groups. However, this choice tends to follow the students' occupational

TABLE 5. DISTRIBUTION OF STUDENTS' CURRICULUM CHOICE AND EDUCATIONAL PLANS BY FATHERS' OCCUPATIONAL GROUPS

Number	Father's Group	Curriculum Choice							Educational Plans						
		College Prep.	Commercial	Agric.	Indust. Arts	Home Ec.	General	DK	NA	Quit H. S.	Graduate H. S.	College	Other	DK	NA
41	I	90	7	0	0	0	0	0	3	0	10	90	0	0	0
179	II	54	20	8	6	1	8	1	2	6	42	43	7	3	0
78	III	53	27	1	4	0	9	1	6	1	39	51	8	1	0
320	IV	32	39	3	12	2	7	1	4	1	59	25	9	6	0
220	V	22	39	1	13	1	16	4	3	6	62	19	9	5	0
115	VI	18	44	4	10	1	16	4	4	6	63	15	10	6	0
47	MW	40	32	2	13	0	11	0	2	4	49	26	11	11	0
1000	Total	37	34	3	10	1	10	2	4	4	53	30	9	5	0

Groups in conformity with their occupational and educational plans. After college preparatory, commercial curriculum is the next highest choice for the upper three occupational Groups. It is the one most frequently chosen by the lower three Groups.

Sex differences were also registered in the students' curriculum choices and educational plans. With the exception of Group II, all females planned for less college training than males. The Group II deviation seems understandable in light of the fact that children of farm owners and managers are included in this category, and it is known that daughters of farmers tend to go to college more than sons.⁷ Among females in the lower three

Groups, occupational plans in Group I were not supported by educational plans insofar as college is a requirement. Among males, all Group I plans received support from college plans. After college preparatory curriculum, females select commercial courses most; males, industrial arts.

Confirmatory evidence of the nature of the relationship between class position and occupational orientation was found when Negro and white students were tabulated separately. Table 6 presents data on Negroes and whites in the lower three Groups only, since there were no Negro fathers in Group I and II and 3 in Groups II and III. The Negro students tended to plan lower than

⁷ For example, see Ralph F. Berdie, *After High School—What?* Minneapolis: The University of Minnesota Press, 1954, p. 94. This is an excellent

study of college and occupational planning of 25,000 high school seniors with later follow-up studies of these plans.

TABLE 6. DISTRIBUTION OF STUDENT'S OCCUPATIONAL ORIENTATIONS BY FATHER'S OCCUPATIONAL GROUPS AND BY RACE

N	Father's Group	Whites							Negroes											
		I	II	III	IV	V	VI	M	DK	NA	N	I	II	III	IV	V	VI	M	DK	NA
Occupational Aspirations																				
294	IV	51	4	16	10	5	0	2	7	5	26	65	4	4	12	0	0	4	0	12
189	V	58	7	10	7	7	1	0	6	4	31	55	0	10	7	3	3	3	3	16
84	VI	43	11	13	6	10	0	1	6	11	31	52	3	16	3	7	0	0	7	13
567	Total	52	6	14	8	6	..	1	7	6	88	57	2	10	7	3	1	2	3	14
Occupational Plans																				
	IV	25	2	40	13	7	1	0	10	1	15	0	23	8	19	0	0	35	0	
	V	20	2	34	10	11	2	0	15	7	6	0	39	3	19	7	0	19	7	
	VI	17	1	35	7	16	6	0	18	1	16	0	32	13	13	3	0	10	13	
	Total	22	2	37	11	9	2	0	13	3	13	0	32	8	17	3	0	21	7	

whites at each of their fathers' occupational Groups, but their aspirations were uniformly high. This lowered planning was expressed also in their educational plans and curriculum choice at each Group level. Thus, in their plans Negro students tended not only to reflect their "class" position, but their "caste" position as well.

Examination of the specific occupations mentioned in the plans and aspirations of these students supports the conclusion derived from the pattern of choice at the occupational Group level. In confirmation of a number of other studies of youths' occupational choice, these students make a narrow range of occupational choice and concentrate on a few familiar and easily identified occupations within this range.⁸ Only 114 different vocations were mentioned by the males and 48 by females, and these choices clustered around Group I choices with a thin distribution over the other five Groups. It seems likely that a specific occupational title serves as a bench-mark of position in the occupational hierarchy for these youths rather than as a descriptive title of one of the vast series of alternative choices in the division of labor. As such, their specific occupational plans are reflective of their position in the stratification system. Slightly less than one-quarter of the students mentioned the same occupation in their plans as in aspirations. Among these students, orientations generally were considerably higher than those of the total sample, indicating they were drawn predominantly from youth having high occupational aspirations. At the same time, these youths were distributed evenly over the six occupational Groups. Students with such matched occupational choices presumably represent a high level of satisfaction with occupational plans. This suggests that where the level of satisfaction is highest, the level of orientation is high and implies that the upper-Group occupations are the ones to which all students are strongly oriented. This seems likely, for if one reasoned that lower-class students generally set a level of orientation in accordance with their class position and were relatively satisfied with it, these

lower-class students with matched plans and aspirations would follow the general pattern of lower occupational planning among lower-class students found in the total sample.

Among males, direct inheritance of occupational orientation from the father tended to be based upon the father's ownership of business or farm and father's professional status. Indications of deviant occupational goals, which are functional for upward mobility but which the upper students tend to avoid, were found among the lower Groups in athletic and military careers. There was a general tendency among the lowers for

TABLE 7. GROUP PERCENTAGE DISTRIBUTION OF MOST PLANNED FOR AND ASPIRED TO OCCUPATIONS OF FEMALE STUDENTS *

Occupation	N	Father's Group					
		I	II	III	IV	V	VI
Aspirations							
Nurse	34	0	7	0	19	15	18
Teacher	26	15	14	5	7	23	0
Secretary	20	0	11	10	7	8	9
Plans							
Secretary	87	0	43	37	40	46	42
Teacher	31	38	32	10	8	13	0
Nurse	24	0	25	0	8	8	12

* This Table is based upon a 50 per cent sample of female students.

autistic aspirations in the upper occupations—aspirations that would be considered "fantasy" choices if made by middle-class children, but which probably are no more fantasy for the lowers in terms of the reality of their position than are the traditional upper professional and business careers.

Some indication of the influence of Group position on the specific occupational choice of females may be found by examining the three most-aspired-to and planned for occupations. Since the same three occupations are "tops" in both plans and aspirations, further analysis of Group influence upon the same occupation is possible (see Table 7). It is significant to note that among girls in the lower three Groups none of their most-aspired-to occupations are matched in plans, while among those in the upper three Groups, all of their most-aspired-to aspirations are more than matched in plans. For example, while 19 per cent of Group IV students aspire

⁸ Confirmatory research is discussed in Charles E. and Edith G. Germane, *Personnel Work in High School*, New York: Silver Burdett Co., 1941 and in other studies too numerous to mention.

to be nurses, only 8 per cent so plan, and while 23 per cent of Group V aspire to be teachers, only 13 per cent so plan. On the other hand, 15 per cent of Group I and 14 per cent of Group II students aspire to be teachers and 38 and 32 per cent respectively plan to be teachers. At the extremes, the daughters of professionals aspire and plan only for teaching, while this profession is mentioned in neither the plans nor aspirations of daughters of unskilled laborers.

The relationship of Group position to plans and aspirations suggests that these youths have similar aspirations but their orientation is differentiated by class when it comes to

TABLE 8. PERCENTAGE OF STUDENTS STATING OCCUPATIONAL PLANS AND ASPIRATIONS

	No An- swer	No An- swer			
	Plans	Don't rations	Mar- Don't Stated	Know	Aspi- rations
Males (N 477)	76	25	84	0	16
Females (N 523)	90	10	86	4	10
Total (N 1000)	83	17	85	2	14

making plans for securing position in the stratification system. While the upper Group students express their aspirations in actual plans for their realization, the lowers tend to drop their aspirations in favor of plans that more nearly conform to their class position. The general pattern is one in which a youth, as he is confronted with the realities of his position and as he comes closer to the necessity of making a definite occupational commitment in terms of a plan, alters his aspiration to more nearly conform to the blockages and conditions of his position. Conversely, the further removed a plan or choice from direct occupational commitment, the more likely it is to be expressed in a relatively high aspiration.

Thus, males, who necessarily will assume occupational roles, are less certain about their occupational plans than females (see "don't know" and "no answer" boxes, Table 8). Males are also less certain about their plans than their aspirations, and for the same reason: they are closer to the point where choices must conform with reality. For the same reason, both males and females state lower occupational plans than aspirations. This is true, also, of the tendency of the

lower Group students of both sexes to be less certain about their occupational futures than uppers and, hence, to indicate more "don't knows."⁹ This pattern is repeated when Negroes are compared with whites and magnified by the fact that Negroes at each Group level tend to plan lower and are less certain about their plans than whites.

In each case, the position of the student (sex, race, class) in the social structure conditions his stated choice or plan, and he makes his plan in accordance with his position. Where conditions of position are such that he must make a decision based upon reality factors, he plans high if assumption of occupational role is remote and conditions favorable (female, white, upper class); low, if assumption of occupational role is more immediate and conditions less favorable (male, Negro, lower class). Where conditions are most irrelevant ("If you could do what you really wanted to do, what would you be?") the choices tend to reach a maximum of uniformity among all students. At the same time the students tend to express higher orientations when they can be immediately realized without reference to position blockages and to lower them as they approach reality factors until students' plans reach a level more consistent with their occupational Group. Students generally select more college preparatory courses than are needed to support their educational plans and plan for more college education than is necessary to support occupational plans. Furthermore, they are most certain about their curriculum choice, less certain concerning educational plans, and least certain of their occupational plans.

This pattern of choice strongly suggests that these youths hold a relatively common perception in the aspiration dimension of mobility orientation, but that the expectation dimension is more sharply differentiated by their general position in the social system

⁹ Hollingshead found a much greater difference among high school students at different class levels in respect to "don't know" occupational plans than is revealed by the present study of 9th graders (*op. cit.*, p. 287). This suggests that age is another variable in the pattern discussed and is confirmed further by the fact that in comparison with younger students the occupational choices of older youths contain less fantasy and conform more to the occupational structure.

(in which class is a significant variant). This offers a resolution of the dilemma posed by the conflicting hypotheses concerning the nature of mobility orientation in American society. Class may or may not differentiate orientation depending upon whether one is considering the aspiration or the expectation aspect of mobility orientation. Thus, the

mobility orientation pattern suggested is one in which aspirations are relatively unaffected by class and, hence, reflect the general cultural emphasis upon high goal orientations, while plans or expectations are more definitely class based and, hence, may reflect class differences in opportunity and general life chances.

A ROLE THEORY APPROACH TO ADJUSTMENT IN OLD AGE *

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AGED populations must adjust to conditions that are not generally characteristic of other stages of the life cycle, namely, the increased probability of illness and impending death. To these conditions any society imposes additional ones with which the aged must come to terms. In our own society, and in many others, the changes experienced by the aged often include (1) retirement from full-time employment by men and relinquishment of household management by women, (2) withdrawal from active community and organizational leadership, (3) breaking up of marriage through the death of one's mate, (4) loss of an independent household, (5) loss of interest in distant goals and plans, (6) acceptance of dependence upon others for support or advice and management of funds, (7) acceptance of a subordinate position to adult offspring or to social workers, (8) taking up of membership in groups made up largely of old people, and (9) acceptance of planning in terms of immediate goals.¹

Cavan and her associates maintain that these changes may be classified under two broad headings: the relinquishment of social relationships and roles typical of adulthood, and the acceptance of social relationships and roles typical of the later years. This suggests the possible utility of a role theory framework for understanding the adjustment of

the aged individual, an approach outlined by Cottrell.² The present study attempts to explore this possibility, giving particular attention to aspects of the relation between an individual's self-conceptions and his social roles. It is felt that adjustment may be best understood when these two categories are examined together.

Data are based on interviews with 500 respondents in the Kips Bay-Yorkville Health District of New York City and 468 respondents in Elmira, N. Y.³ The Elmira field work was done between mid-1951 and early 1952, with respondents constituting a random sample of non-institutionalized individuals sixty years of age or older. The Kips Bay interviewing took place during late 1952 and early 1953. As in the case of the Elmira study, a probability sample of the non-institutionalized aged individuals sixty or over was drawn.⁴

* Leonard S. Cottrell, Jr., "The Adjustment of the Individual to his Age and Sex Roles," *American Sociological Review*, 7 (October, 1942), pp. 617-620.

¹ The Elmira data were collected by the Department of Sociology and Anthropology, Cornell University, under the direction of John Dean and with the assistance of Milton Barron, Bernard Kutner, Gordon Streib, and Edward Suchman. The research was supported by grants from the Rockefeller and Lilly Foundations. The Kips Bay data resulted from a co-operative venture by the Department of Health of the City of New York, the Cornell University Medical College, the Cornell University Social Science Research Center, and the Russell Sage Foundation, and were secured under the direction of Bernard Kutner, David Fanshel, Thomas Langner, and Alice Togo.

² The sample design in the Kips Bay study involved an area sample that weighted the population

* Paper read at the annual meeting of the American Sociological Society, September, 1956.

¹ Ruth S. Cavan, Ernest W. Burgess, Robert J. Havighurst, and Herbert Goldhamer, *Personal Adjustment in Old Age*, Chicago: Science Research Associates, 1949, pp. 6-7.

Although the two interview schedules are not the same, a large proportion of the items are identical. The present study is based on the items common to the two studies. The purpose of utilizing samples in two areas is essentially one of replication, although the environments are not replicated. The premise is that factors affecting the adjustment of the aged in a very large city vary to some extent from those in a relatively small city. If a role theory framework provides a useful tool for predicting adjustment in cities of varying size, then it is that much more generalizable.

Before defining adjustment, it is important to point out that no value judgment is intended. Adjustment to a given socio-cultural setting may or may not be a "desirable" goal for a given individual, depending largely on his own value premises.

Pollak defines adjustment as "the efforts of an individual to satisfy his personal needs as well as to live up to the expectations of others."⁵ He goes on to state that "the well-adjusted person is able to satisfy his needs quickly and adequately as they arise; a poorly adjusted person is unable to satisfy certain of his needs."⁶ Cavan and associates define maladjustment as "behavior which does not completely satisfy the individual and social needs of the person, even though it may reduce his drive tensions. . . . Maladjustments, because they represent partial satisfactions of the wishes and needs of the person and because certain of them become ingrained as habitual behavior, impede readjustment."⁷

The index of adjustment is, therefore, based on the degree to which there is a patterned lack of alignment between the needs of the individual and the rewards he obtains, i.e., the existence of a relatively durable state in which needs are not satisfied. This state may be indicated by the

individual's degree of habitual involvement in the world of fantasy. Absentmindedness, daydreaming about the past, and thoughts of death are the three items constituting our operational definition of degree of adjustment. These items are referred to in the question, "How often do you find yourself doing the following things? Would you say often, occasionally, hardly at all?" They form a Guttman scale for both samples, and this scale may be dichotomized into "maladjusted" and "adjusted" categories.⁸ This measure of adjustment was found to be related to a number of items such as expressions of unhappiness and nervousness which would be expected to be related to it if it were a valid measure.⁹

It should be noted that the data utilized were not originally collected for the purpose of testing the utility of role theory for understanding adjustment. Consequently, there are limitations to the conceptual distinctions that can be made. We will utilize Rommetveit's definition of a social role as "a system of . . . social norms directed toward one and the same individual as member of a group or representative of a psychologically distinguishable category of individuals,"¹⁰ with social norm defined as "a pressure for a pattern of behavior existing between two or more participants in a category of recurring

⁵ The coefficient of reproducibility is 91 per cent for the Kips Bay sample and 89.5 per cent for the Elmira sample. A response of "often" or "occasionally" on any of the items is scored +1. Those who scored +3 and +2 were combined to form the "maladjusted" category, with +1 and 0 forming the "adjusted" category. It should be noted that the items scale in different orders for the two samples. For Elmira, the order from highest to lowest marginal frequency of "maladjusted" responses is (1) absent-minded, (2) daydreaming, and (3) thoughts of death; the order for Kips Bay is (1) daydreaming, (2) thoughts of death, and (3) absent-minded. This difference in scaling order poses interesting and difficult questions about the factors in each community responsible for it but the problems will not be treated here. However, in spite of the difference, the fact that the same items scaled in both studies provides additional support for their unidimensionality.

⁶ Bernard S. Phillips, "A Role Theory Approach to Predicting Adjustment of the Aged in Two Communities," Ph.D. dissertation, Cornell University, 1956, pp. 44-50.

⁷ Ragnar Rommetveit, *Social Norms and Roles*, Minneapolis: University of Minnesota Press, 1955, p. 85.

in low-rental areas. City blocks were classified into three rental groups: \$90 per month and over, \$40-\$89 per month, and \$20-\$39 per month. Approximately 10 per cent of the sample were drawn from the high-rental group, 30 per cent from the middle-rental group, and 60 per cent from the low-rental group.

⁵ Otto Pollak, *Social Adjustment in Old Age: A Research Planning Report*, New York: Social Science Research Council (Bull. 59), 1948, p. 8.

⁶ *Ibid.*, p. 33.

⁷ Cavan et al., *op. cit.*, p. 15.

rent situations." Our basic premise is that behavior that conforms to these pressures is generally rewarded; to the extent that the pattern of reciprocal behavior is disturbed, the rewards are neither sent nor received. Since role changes may not only result in a temporary disturbance of rewards but also in a lasting reduction, definite consequences for adjustment may be expected.

Two of the four role changes to be considered are relatively easy to delimit. It is postulated that changes in role due to the death of one's spouse or to retirement tend to involve an overall reduction in the degree of reward associated with conforming behavior in the new as opposed to the previous roles.¹¹

A third role change is indicated by a "yes" answer to the question, "Do you think people treat you differently because you are older?" In this case, the role is not so circumscribed as in the previous ones but concerns the entire matrix of roles within which the individual behaves. Furthermore, it is indexed by directly examining the respondent's perception of role change.

The fourth role change is indexed by whether or not the individual has reached the age of 70. Changes in chronological age are important for their direct and indirect effects on a multitude of roles. Although it is difficult to point to definite changes in role prescriptions, role expectations or role behavior accompanying, for example, a change from age 60 to age 70, the fact is that the combined effects of this change on various roles make it significant for the present study. It is posited for this role change, as in the case of the previous three, that the overall reward associated with conformity to the changed role prescriptions tends to be reduced.

The final aspect of the theoretical framework has to do with the "self-image," which may be regarded as a complex of self-conceptions. One of these is self-conception of age and is measured in this study by the item, "How do you think of yourself as far as age goes—middle-aged, elderly, old, or what?" The "old" and "elderly" categories may be combined to include respondents

¹¹ The statement is made in this form because there is no direct evidence for it in the data collected.

who identify themselves as old, in distinction to those who identify themselves as middle-aged or young, or who have made no clear-cut identification.¹²

Age identification is conceived as a relatively high-order generalization from various social roles as well as from relatively subtle ongoing physiological and psychological processes. Unfortunately, there are no data on these processes, and thus we are limited to considering the interrelations of the above-mentioned roles and age identification.

It is hypothesized that a self-conception as old is related to maladjustment. Because our society values youth over age, the individual who identifies as old to a degree accepts a negative cultural evaluation of himself. In so doing, he deprives himself of many of the rewards accompanying the adult status, rewards which are associated not only with specific social roles but also with behavior outside of narrow role contexts.

We may now present evidence on the interrelations among the variables of adjustment, role change, and age identification. In the general model age identification is conceived of as an intervening variable between role changes and adjustment, i.e., a variable which specifies conditions under which role changes affect adjustment. The remainder of this paper presents data on (1) the relations between each role change variable and adjustment, (2) interrelations among the various role change variables, (3) the relation between role changes and age identification, (4) the relation between age identification and adjustment, and (5) combined effects of role changes and age identification on adjustment.

Table 1 reports data indicating the relationship to maladjustment of each of the four role changes. All differences in the proportion of maladjusted respondents among those who have and have not undergone role changes are significant at the .01 level with

¹² Twelve per cent of Elmira respondents and 2 per cent of Kips Bay respondents used euphemistic expressions to indicate their age rather than selecting one of the three structured categories. These individuals, who were not willing to commit themselves to a definite identification as old or elderly, were combined with the middle-aged category and other individuals who had not made a transition from a younger age identification.

TABLE 1. PER CENT MALADJUSTED RESPONDENTS BY ROLE

Role	Elmira		Kips Bay	
	Per Cent	N†	Per Cent	N
Employed	22	(171)**	27	(161)**
Retired	42	(98)**	40	(200)**
Married	27	(173)**	30	(221)**
Widow or widower	40	(217)**	47	(180)**
Age 60-69	29	(277)**	31	(254)*
70 or over	52	(187)**	40	(233)*
Not treated differently	34	(366)**	32	(355)**
Treated differently	53	(87)**	48	(118)**

† In this table and in the following ones, N refers to the total number in each category. The sum of those in the employed and retired categories, as well as those who are married or widowed, is somewhat less than the total number of respondents in each sample. In the former case housekeepers are omitted from the samples, while in the latter instance respondents who never married are excluded.

* Difference is significant at the .05 level.

** Difference is significant at the .01 level.

one exception, which is significant at the .05 level.

We may now ask whether or not these relationships are maintained when control variables are introduced. With respect to the employment role, controls on marital status, age, and age identification were introduced. Thus, for example, the age control allows a comparison of employed and retired who are age 60-69 as well as employed and retired who are 70 or over. Consequently, there are six comparisons of employed and retired, two for each control variable, or a total of twelve for the Elmira and Kips Bay samples. Of these, eleven are in the expected direction, i.e., there is a higher proportion of maladjusted respondents among the retired than among the employed, while two of the differences are significant at the .05 level.

With respect to the marital role, controls on employment, age, and age identification result in eleven of the twelve differences between married and widowed in the expected direction, of which five are significant at the .01 or .05 levels. Controls on employment status, marital status, and age identification, when introduced into the age variable, produce results similar to those ob-

tained with respect to the marital role, except that only three differences are significant. Finally, four controls are introduced into the differential-treatment variable, resulting in sixteen comparisons in the expected direction, of which nine are significant at the .01 or .05 levels.

It may be concluded that each of the four variables in Table 1 to a degree is independently related to maladjustment. However, since a high proportion of the differences are not statistically significant after introducing the control variables, one suspects that combinations of various role changes would not greatly increase the proportion of maladjusted respondents. This does not in fact prove to be the case. For example, among those respondents with all of the first three role changes in Table 1, the highest proportion of maladjusted respondents is only 52 per cent for the Elmira sample and 47 per cent for the Kips Bay sample, which is no greater than that for certain role changes taken individually.

The next aspects of the data to be taken up are the interrelations among the role change variables. Our approach is to view the differential-treatment variable as dependent, with the remaining three variables considered as contributing to effecting differential treatment, whether directly or indirectly. From general knowledge of how these changes occur, it would be difficult indeed to imagine feelings of differential treatment as effecting any of the other three role changes in a high proportion of instances. The differential-treatment variable is representative of a large number of dependent variables, other examples of which might be

TABLE 2. PER CENT RESPONDENTS TREATED DIFFERENTLY BY ROLE

Role	Elmira		Kips Bay	
	Per Cent	N	Per Cent	N
Employed	13	(170)*	24	(160)
Retired	23	(95)*	28	(187)
Married	14	(219)**	20	(169)*
Widow or widower	27	(176)**	30	(206)*
Age 60-69	13	(271)**	23	(244)
70 or over	30	(185)**	29	(230)

* Difference is significant at the .05 level.

** Difference is significant at the .01 level.

TABLE 3. PER CENT RESPONDENTS WHO IDENTIFY AS OLD BY ROLE

Role	Elmira		Kips Bay	
	Per Cent	N	Per Cent	N
Employed	12	(172)**	23	(154)**
Retired	42	(96)**	50	(195)**
Married	18	(220)**	35	(167)*
Widow or widower	35	(178)**	45	(217)*
Age 60-69	11	(273)**	27	(246)**
70 or over	47	(186)**	55	(240)**

* Difference is significant at the .05 level.

** Difference is significant at the .01 level.

changes in various types of activities and in social participation.

Table 2 indicates a relationship between each of the three role changes and the dependent variable of differential treatment, a relationship that seems to be less pronounced in the Kips Bay sample. This perhaps is due to a greater degree of anonymity in a large city and consequently a degree of compartmentalization of any role change, resulting in reducing its possible influence on other role changes.

We will now consider the relation between the three relatively independent role changes and a self-conception as old, the primary data for which are presented in Table 3. This relationship is strongly indicated by five .01 level differences and one .05 level difference.

If, for each role change variable, the other two are introduced as controls, the following results are found: (1) for the employment role, all of the eight relationships between this role change and identification as old are positive, with seven being significant at the .01 level; (2) these results are identical to those obtained with the age role; and (3) with respect to the marital role, all differences are in the expected direction, and three

of these are significant at the .01 or .05 levels.

These data indicate a considerable degree of independent relationship to age identification for each of the three role variables. This is substantiated upon examining the cumulative effects of the above three role changes on age identification. For the Elmira sample, the proportion of identifications as old for three role changes is 56 per cent; for the Kips Bay sample, it is 65 per cent. These proportions are somewhat above the analogous percentages for any one role change taken by itself.

The fourth aspect concerns the relation between age identification and adjustment. The evidence presented in Table 4 shows

TABLE 4. PER CENT MALADJUSTED RESPONDENTS BY AGE IDENTIFICATION

Age Identification	Elmira		Kips Bay	
	Per Cent	N	Per Cent	N
Middle-aged	31	(343)**	28	(287)**
Old	58	(118)**	49	(199)**

**Difference is significant at the .01 level.

TABLE 5. PER CENT MALADJUSTED RESPONDENTS BY AGE IDENTIFICATION AND ROLE

Age Identification	Role	Elmira		Kips Bay	
		Per Cent	N	Per Cent	N
Middle-aged	Retired	39	(56)	31	(97)
Old	Employed	57	(21)	37	(38)
Middle-aged	Widow or widower	40	(116)	31	(119)
Old	Married	54	(41)	36	(58)
Middle-aged	Age 70 or over	44	(99)	28	(104)
Old	60-69	48	(33)	42	(66)

that a significantly higher proportion of maladjusted respondents are found among those who identify as old as opposed to middle-aged. This is found to hold when controls on employment status, marital status, and age are introduced. All of the twelve differences are in the same direction and eleven of them are significant at the .01 or .05 levels.

Finally, combined effects of role changes and age identification on adjustment may be considered. Table 5 compares the proportion of maladjusted respondents among those who identify as middle-aged and have undergone a given role change with the proportion among those who identify as old and have not undergone this role change. Although none of the differences are significant, they are all in a direction indicating that age identification can reverse the expected relation between a given role change and adjustment. This is striking in view of the fact that the role change variables were

previously shown to be significantly related to adjustment.

It is possible to carry this type of analysis one step further due to the size of the samples under consideration. For example, one might compare respondents who identify as middle-aged and have undergone any two of the three role changes with respondents who identify as old and have not experienced these role changes. There are three different combinations of two role changes for each sample. The data here indicate a turning point, for in five of these six comparisons age identification does not reverse the expected relation between the role changes and adjustment; in fact, the expected relation is statistically significant in two of the six comparisons.

This paper has outlined a theoretical framework that may be utilized in predicting the degree of adjustment of the aged. In this approach, age identification is conceived of as an intervening variable between each role change and adjustment. The five aspects of the data may be summarized as follows:

1. The role changes considered are significantly related to maladjustment, although

there is little tendency for multiple role changes to cumulate and result in a closer relation to the adjustment variable.

2. The differential-treatment role change, conceived of as representative of a number of variables influenced by employment, marital, and age role changes, generally is significantly related to these role changes.

3. The role changes considered are significantly related to identification as old, and there is some tendency for multiple role changes to cumulate, resulting in a closer relation to age identification.

4. Identification as old is significantly related to maladjustment.

5. Age identification can reverse the expected relation between any one of the role changes considered and adjustment. Where two role changes are combined, however, this reversal does not generally take place.

It is hoped that future studies of adjustment will further specify the relatively crude variable of role change. In addition, the significance of the age-identification variable for adjustment indicates a need for further investigation of this and other aspects of the self-image.

EXECUTIVES AND SUPERVISORS: CONTRASTING SELF-CONCEPTIONS AND CONCEPTIONS OF EACH OTHER *

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COOLEY'S "looking-glass self" and Mead's "taking the role of the generalized other" rank among the foremost concepts in sociology.¹ In spite of their utility and significance, however, these concepts have rarely been exploited in the investigation of why some individuals achieve more vertical occupational mobility and career suc-

cess than others in the same or similar occupational environments.

Successful executives in business and industry have often been and are continually being studied through self-appraisals obtained by personal interviews and questionnaires.² Their success stories are widely publicized, and the top-level business and industrial executive has been popularized as an ideal type of successful American. From such self-appraisals by outstanding executives, so

* Revised version of paper read at the annual meeting of the American Sociological Society, September, 1956.

¹ Charles H. Cooley, *Human Nature and the Social Order*, New York: Scribner's, 1902; and George H. Mead, *Mind, Self and Society* (Charles W. Morris, ed.), Chicago: University of Chicago Press, 1934.

² A recent example of such research is found in W. Lloyd Warner and James C. Abegglen, *Big Business Leaders in America*, New York: Harper and Brothers, 1955.

many generalizations have been made about "how to become successful" that it is often erroneously assumed that the means of achieving executive success have universal applicability. What is usually overlooked is that executive success, like leadership and success in other occupational fields, is subject to situational and environmental variability. It would therefore seem logical to study differential executive success situationally by asking top-level executives to appraise their "looking-glass selves," and to take the roles of "generalized others" on the top and bottom rungs of the executive ladder by appraising retrospectively their own personal attributes in contrast with those of subordinates in their own or similar occupational environments. It would also seem logical to compare these top-level appraisals oriented downward with similar lower-level appraisals oriented upward.

Essentially, this was the approach employed in a comparative study made in 1954 and 1955 of 50 top-level executives in 30 large and bureaucratically structured business, industrial, governmental, and educational organizations, and 50 first line supervisors in the same or similar occupational environments.³ The setting of the study was a dynamic Southern community, fictitiously called "Bigtown," which had experienced within a span of 30 years a growth to a population of 200,000 as a result of industrial and business expansion. The confidential personal interview was used in studying the comparative samples of top- and low-level individuals in management, all of whom had long occupational histories. Because of the effective matching of the samples on the basis of age and long occupational histories, the retrospective appraisals had a unique quality of depth in time. The confidential nature of the study made possible considerable interviewer-interviewee rapport, which

brought forth a wealth of subjective data. Since standardized interview schedules were utilized, comparative analysis of the data was facilitated.

The following analysis is limited to the executives' and the supervisors' self-conceptions and conceptions of each other. In eliciting these self- and other-conceptions, open-ended questions were utilized on the interview schedule, and no pre-conceived list of desirable or undesirable attributes was employed. The attributes presented below are derived from a content analysis of equivalent terms most frequently mentioned by interviewees. There was virtually no disagreement concerning the attributes of executives and supervisors, although some respondents listed more attributes than others. Each attribute was mentioned independently by at least 15 of the 50 persons involved in each self- or other-rating.

RESULTS

Most executives conceived of themselves as possessing several of the dynamic personal attributes revealed in Henry's well-known study of 100 executives in the Chicago business community.⁴ Among these were: strong achievement desire, high mobility drive, sympathetic conception of authority, considerable ability to organize, firm decisiveness, strong self-structure, much aggressive activity, and direct orientation toward reality. Mention of these executive attributes was to be expected, but of more interest were the main distinctions that executives made between themselves, their associates, and first-line supervisors they had known through the years.

These comparative self- and other-appraisals usually began with a statement of qualities that executives possess and that supervisors either lack or possess to a lesser degree. Among the distinctions most frequently made by executives between themselves and supervisors were: more energy, alertness, and initiative; aggressive as opposed to submissive attitudes; more understanding of and ability to get along with and

³ Further information on the scope, method, and content of the study is presented in the following papers by the authors: "Absentee-Owned Corporations and Community Power Structure," *American Journal of Sociology*, 61 (March, 1956), pp. 413-419; "Executives and Supervisors: A Situational Theory of Differential Occupational Mobility," *Social Forces* 31 (December, 1956), pp. 121-126; and "Executives and Supervisors: Contrasting Definitions of Career Success," *Administrative Science Quarterly*, 1 (March, 1957), pp. 506-517.

⁴ William E. Henry, "The Business Executive: The Psychodynamics of a Social Role," *The American Journal of Sociology*, 54 (January, 1949), pp. 286-291.

manipulate people; greater willingness to assume responsibilities and make decisions; greater ability to deal with and impress superiors; better judgment and foresight; more magnetic, well-rounded, projective personalities; more tact and poise; better problem-solving ability; more adaptability to changing situations; more determination and strength of personal character; different definitions of the meaning of success; greater ability to sell themselves and their ideas, and to get things done through group effort; more education and training; different occupational and social contacts and opportunities; different loyalties and job interests. Illustrative of the self- and other-conceptions of the executives are the following:

Executive A: Successful executives are not "born," or "made" in college, but are products of their social environments. Compared to low level supervisors they have much more ability, personality, human understanding, and motivation. They have different attitudes and values and different definitions of organizational and personal success. Low level men simply lack the inner determination to climb further up the executive ladder.

Executive B: The main distinctions are: "spark" or lack of it, willingness to accept responsibility and make decisions or the lack of it, ability to handle people or the lack of it. I can't define "spark," but you know it when you see it. Maybe it is a combination of personality and drive.

Executive C: The big difference in the two levels is in the ability to analyze the motives of others and to foresee their reactions. Low level men are unable to realize why people react as they do. Because of this they lack the ability to plant ideas in others and get them to do things.

Like the executives whom Henry studied, these executives placed high values on achievement and self-directedness, but they may also pay a high price for holding these values.⁵ The executives were asked to give their conceptions of the penalties and sacrifices associated with the achievement of top-level executive success. Among those most frequently mentioned were: adverse effect of a pressure environment on personal health; considerably more worry than the average professional person; lack of time for recreation and leisure; insufficient opportunity for

normal family life; a certain amount of loneliness associated with an isolated position; feeling that hard work would lead to even harder work; recurring invasions of personal privacy; forced suppression of personal desires; continuous disruption of personal plans; constant fear of making wrong decisions. One executive stated:

Executive D: This corporation has been reorganized just so I could turn over the presidency to a younger man. I wanted to get rid of all of these responsibilities, worries, and pressures. The ups and downs in the competitive business world are terrific. You're always on the 'phone, days and nights and holidays. I've got to get more time with my family and more time for recreation before it is too late. I haven't had a vacation in four years, and the only way to get one is to just pack up and leave town.

In order to compare the self- and other-conceptions of the executives oriented downward, the supervisors were invited to give similar self- and other-conceptions oriented upward.⁶ When asked to make the main distinctions between themselves, their supervisory associates, and executives they had known through the years, the great majority rather surprisingly tended to concede to executives greater amounts of the same personal attributes in which executives had tended to claim superiority. What was of more interest, however, were their reasons for conceding to executives this superiority. Their concessions seemed to have resulted not only from their conceptions of their own personal limitations and those of their associates, but also from their conceptions of the differential role expectations of executives and supervisors. Supervisors tended to be acutely aware of the handicaps of their socio-cultural backgrounds, education and training, and occupational opportunities.⁷ As derivatives of these self-conceived personal limitations, they tended to concede to executives: better social and educational backgrounds; more ambition and motivation;

⁵ See Robert Dubin, "Upward Orientation Toward Superiors" in his *Human Relations in Administration*, New York: Prentice-Hall, 1951, pp. 272-273.

⁶ The effects of these factors upon career patterns are analyzed in the authors' "Executives and Supervisors: A Situational Theory of Differential Occupational Mobility," *op. cit.*

higher level attitudes, values and life goals; more energy, alertness, and initiative; better understanding of human nature; better rounded, more magnetic personalities; more ability to handle large numbers of people; more ability to solve problems and make long-range plans; more willingness to delegate authority, accept responsibility, and make decisions. Illustrative self- and other-conceptions of the supervisors follow:

Supervisor A: Top men are totally different from supervisors. Top men have better social backgrounds and education and thus have different abilities and goals. Most supervisors want to get so high and no higher because they don't want big responsibilities. They just want to carry out instructions without having to make decisions.

Supervisor B: Top level men are like Army Generals. They sit down, make the plans, and issue the orders, though in doing so they are thoughtful, courteous, understanding, and helpful. Supervisors carry out the orders like Army Sergeants. Some are soft-boiled, and some are hard-boiled. Some are drivers, and some are leaders. It all depends on how they think the boss wants them to behave.

Supervisor C: The top level is better at getting jobs done through group effort because they have more flexible, more magnetic personalities. They are the better planners, organizers, coordinators, decision-makers, and administrators. That's what top men are for, anyway.

To throw further light upon their conceptions of the roles of top level executives, the supervisors were asked the question, "If you could start all over again, would you like to become a top level executive?" The great majority of the supervisors stated emphatically that they would *not*. Usually they gave as their reasons, "too many worries, headaches, and responsibilities." As one veteran supervisor expressed it:

Supervisor D: Who, me? Hell no! Not way up top. Look at our head man. He has a wonderful education, makes a lot of money, and has a big reputation. But that kind of a

job commands a man's whole being, day and night, and almost commands his soul. He's always contending with worries, responsibilities, and decisions. The directors hound him to death. With the power and the glory go the headaches and the ulcers. One of my top level friends died the other day of "industrial suicide." As for me, I'd rather have a happy, pleasant life. What's the use of killing yourself?

Thus, there appeared in the self- and other-conceptions of supervisors an acute awareness, not only of their own personal limitations, but also of the penalties and sacrifices associated with top level executive roles.

IMPLICATIONS

1. Superiors tend to judge their subordinates in terms of their own self-images, and to appraise low-level role performance by comparing it with their own high-level role performance.

2. Subordinates tend to judge their superiors in terms of their own images of high-level role expectations, and to account for their own personal limitations in terms of socio-cultural backgrounds and conceptions of low-level role expectations.

3. Both superiors and subordinates tend to be aware of the rewards, penalties, and sacrifices associated with high-level roles. Such an awareness differentially influences achievement desires on the two levels.

4. Such self-conceived achievement desires positively or negatively affect role performance and therefore differentially influence life-span career success.⁸

Further study of comparative samples of individuals at different levels in various occupational hierarchies may be helpful in increasing understanding of such factors as differential motivation, role performance, and status striving.

⁸ On this point, see the discussion in *ibid.* and in our "Executives and Supervisors: Contrasting Definitions of Career Success," *op. cit.*

COMMUNICATIONS AND OPINION



COMMENT ON COWGILL'S "TRENDS IN RESIDENTIAL SEGREGATION OF NONWHITES"

To the Editor:

Dr. Cowgill's article [*American Sociological Review*, 21 (February, 1956), pp. 43-47] analyzing trends in the residential segregation of nonwhites contains the statement that San Francisco, Berkeley, and Oakland, California, showed marked decreases in segregation from 1940 to 1950. He points out that the movement of Negroes to western cities during the decade could be expected to increase segregation, but that ". . . since this index pertains to all nonwhites, including Mongoloids, it is possible that the dispersion of Japanese with internment during World War II had permanent effects which tended to reduce the segregation scores in cities with heavy concentrations of Oriental population. This may be the explanation of the sharp reduction of segregation in the San Francisco area."

A partial test of this observation is available. Shevky and I reported the 1940 to 1950 trend in residential segregation for Negroes and other nonwhite races (mostly Orientals in the San Francisco Bay area) separately early in 1955 [see E. Shevky and W. Bell, *Social Area Analysis*, Stanford: Stanford University Press, 1955, pp. 43-53]. Using Census tracts instead of blocks, taking the entire tracted area as a unit instead of some of the cities separately, and employing a different index of segregation, we found that Negro residential segregation had increased (from .15 to .33) and that the residential segregation of the other nonwhites had decreased (from .41 to .28). During this same period the Negro population increased 62.4 per cent and the other nonwhite races had increased by 48.9 per cent in the area. Dr. Cowgill's finding represents an average of two contradictory trends: (1) an increase in the residential segregation of Negroes and (2) a decrease in the residential segregation of other nonwhite races.

This highlights one of the difficulties of using block statistics instead of census tract statistics. In their published form, block statistics do not report data for Negroes and other nonwhites separately, so computation of Negro segregation

scores apart from other nonwhite segregation scores and vice versa is impossible. To what extent Cowgill's use of block statistics in analyzing residential segregation of nonwhites has obscured opposing trends in other cities remains to be seen, but one suspects that the official relocation of the Japanese on the one hand and the movement of Negro workers on the other during the war had markedly different effects on the change in the residential segregation of each of these groups from 1940 to 1950. Certainly these trends should be analyzed separately for western cities and possibly some other cities as well.

There are additional considerations which suggest that Cowgill's trend analysis may need qualification. Cowgill correctly reports that block data were published for 209 cities from the 1950 census. However, the census tract series did not include 62 cities, but included 68 urban areas (excluding Honolulu) within which are contained about 500 cities. For example in the San Francisco Bay area the following cities are included within the tracted area: San Francisco, Oakland, Berkeley, Albany, Emeryville, Piedmont, Alameda, San Leandro, Richmond, and El Cerrito. This represents about 68 per cent of the population of the Standard Metropolitan Area. Ideally, it would be desirable to have 100 per cent of the SMA tracted, but, even so, a larger proportion of the population of the metropolitan area is contained in the tracted area than is contained in the block bulletins since block statistics are not available for Albany, Emeryville, Piedmont, San Leandro, and El Cerrito. If the Bay area's nonwhites were concentrated in one or more of these cities, Cowgill's trend analysis of nonwhite residential segregation for the Bay area as a whole would be unrealistic.

Even if block data were given for all of these cities, however, it still would be possible to reach erroneous conclusions concerning the change in residential segregation in the Bay area from 1940 to 1950. It would be theoretically possible for San Francisco, Oakland, Berkeley, Alameda, and Richmond to have low segregation scores when taken individually in the way Dr. Cowgill does, but for the area as a whole to have a high segregation score when the cities are taken together in the way Shevky

and I do. For example, this would occur if the nonwhites were concentrated in Richmond, but were contained in equal proportions in all Richmond census tracts, and if the other cities in the area each contained much smaller proportions of nonwhites also homogeneously mixed with whites in every census tract. Of course, whether the metropolitan area should be taken as a separate unit depends on the purpose of the research. Cowgill seems to be pressing toward a generalization about the metropolitan area as a whole when he says, "the San Francisco area moved in a counter-direction to the more prevalent tendency on the west coast toward a tighter segregation pattern."

Dr. Cowgill's article is an important contribution to the study of residential segregation. However, his conclusions, which he states "conclusively," and his conviction that we have "adequate operational definitions of the term segregation" as well as "valid and sensitive measures" of it need to be tempered by the explicit recognition of the fact that the use of alternative procedures and data might result in different, even contradictory, findings and that many methodological problems remain to be solved.

WENDELL BELL

Northwestern University

EMPIRICAL PROPOSITIONS AND MAX WEBER'S *VERSTEHENDE SOZIOLOGIE*— A Rejoinder

To the Editor:

In a recent article [“Empirical Science and Max Weber's *Verstehende Soziologie*,” *American Sociological Review*, 22 (February, 1957), pp. 26–32] Munch undertook an extensive criticism of the present writer's paper, “Empiricism and the Social Sciences.” [*American Sociological Review*, 21 (April, 1956), pp. 135–137]. Subsequent references to “the original paper” will refer to this one.] Without wishing to detract from the positive qualities of Munch's thoughtful and informative discussion, it is proposed to show that the refutative content of his article is but an *ignoratio elenchi*. The argument of “Empiricism and the Social Sciences” had but a single objective: *To propose, in a particular case, the making of a distinction where an actual difference exists*. The arguments adduced by Munch, erroneously imply the following objectives which should not have been imputed to that paper:

1. To discuss any of the innumerable other distinctions that might be important, such as that involved in distinguishing “The objective identification of a factual object, property, con-

dition or event from its *symbolic* representation.” (Munch, p. 26) The original paper did not undertake to deal with widely known elementary methodological topics.

2. To defend the idea of, or encourage the practice of, “a *purely* empirical science” (Munch, p. 27) or even an *impurely* empirical science, for that matter.

3. To discuss the meaning of “empirical” independently of its use in the phrase “empirical proposition.”

4. To discredit *Verstehende Soziologie* or Max Weber. Max Weber is the name of a scholar of deservedly great reputation who propounded ideas of varying merit. “Empiricism and the Social Sciences” was directed to a minute portion of his writing which has been adopted in the form in which it was criticized therein, by an influential segment of American sociologists. The spokesmen for this group have claimed in both their writings and classroom lectures that *Verstehende Soziologie* is “empirical” and therefore “scientific” in the same sense that would be true for the physical sciences. (This statement is not intended to apply to all who regard themselves as *Verstehende* sociologists, nor even necessarily to the majority of them.) The original article undertook to demonstrate a difference of overriding importance that would invalidate such a claim.

5. To describe the *psychological genesis* of an empirical formulation. The criterion proposed applies only as a test of a proposition that has already been formulated. It has no reference to the procedures or processes whereby the formulation is derived.

6. To impart to professional sociologists information readily accessible to them in “all dictionaries.” The purpose of dictionaries is to report current usage, not to prescribe it. If the revision of dictionary definitions were barred, there would be considerably less sociological literature, and Weber's own output would have been seriously curtailed.

7. To deny the part played in scientific methodology by *a priori* principles of a metaphysical nature. Since the present writer is well aware that scientific procedures are based on *a priori* assumptions, the observation that the empirical procedure he proposed is “empirically irrefutable” (Munch, p. 28) is completely irrelevant.

8. To seek “to exclude from the term ‘empirical’ the whole analytical aspect of the scientific procedure . . .” One can only conjecture that this supposed position has been inferred from the insistence by the present writer, that to be called “empirical,” a proposition should meet a certain standard. The inference by which Munch's conclusion was reached must

bear the following analogy: In contending that cake requires a leavening agent, one seeks to exclude flour, shortening, eggs, etc.

"Empiricism and the Social Sciences" as it was finally published was in fact a fragment of a manuscript some five times its length, following the admonition of a journal editor (not of the *Review*) to "cut out the lengthy methodological prolegomena." There is good reason to believe that the more extended version might have forestalled some of Munch's criticisms inasmuch as it anticipated them. However, some of his representations are contradicted in highly important respects by the paper as it was actually published. Let us take, for example, his statement, "However, we generally refer to any thought process as 'empirical' in so far as it is 'relating to or based on' empirical observation, no matter how many steps removed from it." (Munch, p. 27) Compare this with "Now, both 'birth rates' and 'real income' are more abstract than either 'births' or 'population' since the two latter can be observed quite directly while the two former must be derived . . . [yet a specified proposition relating them] . . . is empirical . . ." (Pierce, pp. 136-137). The point will be even more evident to the reader who refers back to the statement in its complete context.)

Similarly misleading as to the content of the original paper is Munch's admonition (p. 27), "Depending on the level of analysis, the 'properties' of any phenomenon may from a different point of view be regarded as 'relationships' . . ." Compare that statement with, "It is easy to be misled by a deceptive similarity between these two things ['verification of an empirical proposition' and 'objective confirmation of a definition'], particularly since the same statement might be either depending on the context in which it is used." (Pierce, p. 136) Unlike Munch, however, the present writer would insist that where procedure has been truly empirical, a "level of analysis" may always be found in which "property" and "relationship" do become mutually exclusive and sharply distinguishable.

Finally, Munch is highly misleading in his strong implication that the present writer sought to discard from sociological research procedures "meaningful" content in its broader sense, which includes *emotional* understanding as "when through sympathetic participation, we can adequately grasp the emotional context in which the action took place." (Weber, as quoted by Munch, p. 31) This misleading implication invites comparison with the statement, "Accepting at the outset that the procedure of 'understanding' (in the Adam Smith-C. H. Cooley sense of a 'sympathetic' apprecia-

tion of the experiences of subjects) is indispensable to sociological research, we should like to scrutinize the legitimacy of its use in the narrower sense of and in the manner prescribed by Max Weber." (Pierce, p. 135) Any doubt as to the importance attached by the present writer to the concepts of "meaning" and "understanding" in sociological analysis should be quickly dispelled by reference to his article, "On the Concepts of Role and Status," (*Sociologus*, New Series, 1956, Vol. 6, pp. 29-34). It should be noted in passing that contrary to the likely inference from Munch's discussion, Weber relegates "emotional understanding" to a position of virtually no theoretical importance. (See for instance Max Weber, translated by Talcott Parsons, *The Theory of Social and Economic Organization*, New York: Oxford University Press, 1947, p. 96.)

There is serious error in the statement that "What distinguishes the empirical sciences from other branches of human knowledge, then, is that their concepts and propositions (apart from their *a priori* principles) are ultimately referable to human perception." (Munch, p. 27) The ultimate referability to human perception is true; but that it is a distinguishing characteristic of empirical science is not. A huge proportion of human language as used by all elements in society is ultimately referable to human perception, but that same segment of the language is not coextensive with science. The names listed in a telephone directory refer to perceptible objects but the directory is not a scientific treatise. The proposition that "if I dial a certain number, a certain phone will ring," can hardly be called a scientific proposition. Even the general proposition that "if I dial *any* given number, a phone with a corresponding number will ring," is not an empirical proposition of science. Astrology and phrenology are referable to such observable data as stars and bumps, but they are not empirical sciences. One might say that they are not branches of human *knowledge*, but that would be just begging the question. It is only when the propositions are "ultimately referable" to human perception in the manner indicated in "Empiricism and the Social Sciences" that they are legitimate empirical propositions in a scientific sense.

Even Munch's hand picked examples of "normative sciences" (Munch, p. 27) would, if we applied nothing more than the criterion he proposes, be indistinguishable from empirical sciences. Even though their propositions *need* not be referred to perceptual experience, they can be, and frequently *are* so referred—hence are "ultimately referable." For example, logicians distinguish between tests of "valid or

invalid" on the one hand and "true or false" on the other (syntaxics and empirics). The latter is linked with perceptible things. Propositions of ethics and jurisprudence are both "ultimately referable to human perception." Neither of these fields is, in its origins, a *creatio ex nihilo* and there is no law which prevents one from attempting to determine the extent to which their respective norms are embodied in the actual conduct of human beings. Analogously with aesthetics and concrete art forms. Even "pure" mathematics has time and again with the mediation of applied mathematics been *ultimately* referred to perceptible objects and has not infrequently undergone reformulation as a consequence. And even "scientific methodology" stands or falls with its pragmatic value as this is determined by perceptible results. But in any case, the fact that there might be areas of human knowledge that *need* not be referred to human perception, would not establish this as the *distinguishing* characteristic of empirical sciences.

Munch's objections prove then to be terminological. The hard substantive issue with which he never comes to grips is that each of the disciplines solidly established as empirical sciences integrally embodies (among other things) in its corpus of theory, a critically important type of proposition that is qualitatively different from the types to be found in *Verstehende Soziologie*. That "Weber never claimed that *Verstehen* could be used as an experimental device" becomes completely irrelevant in this light and hence, must be rejected as a criticism.

The only real issue remaining is the wisdom of the choice of words. The history of the use of the word "empirical" makes it evident that one can not use the term clearly or precisely without antecedently stipulating its use. A common discussion of philosophers at their professional meetings concerns what clear uses if any, the word "empirical" may have. The usage chosen by the present writer was intended to expose the legerdemain by which some *Verstehende* sociologists have implied a greater similarity to clearly empirical sciences than is justified by the facts.

Many more things might be said, but the point would seem to be made that with only one real exception, Munch's criticisms lack relevance; and even the exception is untenable. Discussion of the extent to which Munch's discussion is a competent exegesis of Weber lies outside the scope of this communication. In all fairness it should be said that in so far as it is not intended to have relevance as a negative criticism of the original paper, the discussion from about the end of page 29 to the beginning

of page 31 (exclusive of footnotes) has considerable merit, although it can properly be claimed that some of the same observations appeared in the original long version of "Empiricism and the Social Sciences."

ALBERT PIERCE

Bucknell University

ON DISASTER STUDIES

To the Editor:

Being devoted to the development of a field of scientific research on human aspects of disaster, we were delighted with the publication of "The Persistence and Emergence of Social and Cultural Systems in Disasters," by William H. Form, Charles P. Loomis, et al., in the April, 1956 issue of the *American Sociological Review*. It is a splendid contribution, and it is only a small part of the large contribution that this group has made to disaster research.

I agree wholeheartedly with the authors' desire for more and better research on the types of sociological and social-psychological problems they specify. However, their article might permit one erroneous inference which, although minor, should be corrected for readers of the *Review*. They state: ". . . many recent disaster studies have been designed to assess the effect of disasters on individual personality systems, rather than on strategic social systems. With the exception of Killian's work on the relevance of role conflict, and that of a few others, sociologists have hesitated to apply the tools of their trade to disaster analysis. (p. 180)"

A survey of disaster research personnel, which we conducted in January, 1955, showed that about eighty scientists were then engaged or had recently engaged in research on human aspects of disaster. Of these, 38 per cent were sociologists, 30 per cent were psychologists and social psychologists, 10 per cent anthropologists, and the remaining 22 per cent were distributed among physicians, economists, historians, city planners, and specialists in government, social welfare, engineering, geography, chemistry, and hospital administration. Moreover, a review of the approximately thirty research reports produced during the past five years shows that the great bulk of research has had a sociological or social psychological orientation. A great deal of attention has been devoted to variables mentioned by the authors in their footnote 3—for example, "how group identifications reduce personal disorganization"—during the same time that only one study (that I know of) was specifically and directly devoted to an analysis of individual personality systems in disaster. Many investigators have been concerned with

individual behavior, but in the context of situational, social, and cultural variables.

From a broad perspective of our current knowledge of human behavior in disasters, one must conclude that as far as field studies of behavior in actual disasters are concerned, the greater lag is in "psychological studies of disaster," not in sociological and social psychological studies. The more important conclusion, of course, is that the field of disaster research is so broad, its theoretical and practical problems are so great, that it requires the earnest application of the methods and theories of all the behavioral sciences.

HARRY B. WILLIAMS

*Committee on Disaster Studies
National Research Studies*

ON THE REVIEW OF INDONESIAN TRADE AND SOCIETY

To the Editor:

Dr. van der Kroef has earlier given evidence of rather a special interest in the writings of the late Dr. van Leur [see *The Far Eastern Quarterly*, XI (1951-52), pp. 17-30; XII (1952-1953), p. 46, pp. 258-259]. It seems a pity, then, that in reviewing van Leur's *Indonesian Trade and Society* [*American Sociological Review*, 21 (August, 1956), pp. 521-522] he should write: "Though the choice that has been made of van Leur's writings is on the whole a representative one, the present reviewer would have preferred the more extensive essay on the possibility of the eighteenth century as an Indonesian historiographical category. . . ." That study is, in fact, among the writings included in the volume, where it bears the title "On the Eighteenth Century as a Category in Indonesian History" (pp. 268-289).

A. VAN MARLE

Koninklijk Instituut voor de Tropen

REPLY TO DR. VAN MARLE

To the Editor:

Dr. van Marle is quite right: van Leur's historiographic essay on the eighteenth century as category in Indonesian history does in fact appear on the pages indicated. I sincerely apologize that in the finishing of my review my original intent has become lost, resulting in this error. I had meant to indicate a preference for the inclusion of van Leur's article on Dutch cultural policy in Indonesia [*Koloniaal Tijdschrift*, 29 (1940), pp. 434-441] instead of the inclusion of both of van Leur's historiographical essays (i.e., the one on "The Study of Indonesian History" and on "The Eighteenth Century as Category in Indonesian History"), which makes for an avoidable redundancy.

JUSTUS M. VAN DER KROEF

University of Bridgeport

CORRECTION

To the Editor:

It has been called to our attention that an independent study of Negroes in the *Dictionary of American Biography*, including the supplementary volume, discloses that their number may be much less than that reported by Vance and cited in our article, "Some Characteristics of American Negro Leaders," *American Sociological Review*, 21 (October, 1956), p. 589, fn. 1. Richard Bardolph, "The Distinguished Negro in America, 1770-1936," *American Historical Review*, 60 (April, 1955), p. 527, states, "A search of the 14,285 sketches in the *Dictionary of American Biography* reveals that only 89 of the number . . . treat Negroes . . .," whereas Vance reported finding 613.

THOMAS P. AND ELIZABETH H. MONAHAN

*Municipal Court of Philadelphia, and
American Friends Service Committee*

NEWS AND ANNOUNCEMENTS



OBITUARIES

Raymond E. Bassett 1904-1956

Dr. Raymond E. Bassett, Professor and Chairman of the Department of Sociology at the University of New Hampshire, died December 5, 1956, at the age of 52.

After graduating from Phillips Exeter Academy in 1922, he entered the University of Vermont and later transferred to Yale University where he received his bachelor's degree in 1928. He received his master's degree from the University of Vermont in 1934, and his Ph.D. from the University of Washington in 1948. While at the University of Washington he served as instructor in sociology and consultant in the Public Opinion Laboratory. He joined the New Hampshire faculty in 1948 as professor of sociology.

He had a keen interest in writing during his college days, and after completing his work at Yale, entered the field of journalism for several years. He was on the staff of the *Barre Daily Times*, *Burlington Free Press* and *Portland Oregonian*.

He finally decided to become a teacher, and to follow in the footsteps of his father, Professor Samuel E. Bassett, who was head of the Greek Department at the University of Vermont for many years. His first position as educator was principal of Stowe High School. He later joined the staff of Goddard College and subsequently, Gorham State Teachers College.

Those who knew Dr. Bassett as a teacher, colleague, or friend respected and liked him for his personal and intellectual honesty, his scientific integrity, his utter lack of pretense and his warmth of personality. He was much respected in his profession and highly thought of as a departmental chairman because of his fairness, honesty, reluctance to be critical, and his characteristic modesty. His extensive experience in the field of journalism and teaching at all levels of education, gave him a wide variety of interests

and general curiosity about life. He was a true humanitarian and he provided a model of the behavior he expected in others.

Dr. Bassett's scholarly contributions include papers published in the *American Sociological Review*, *Public Opinion Quarterly* and *Sociometry*. At the time of his death he had partially completed the manuscript for a book on communication and was engaged in clarifying logical applications of communication theory to social situations.

CALVIN F. SCHMID

University of Washington

Charles Spurgeon Johnson 1893-1956

Charles Spurgeon Johnson was born in Bristol, Virginia, July 24, 1893 and died in Louisville, Kentucky, October 27, 1956. After receiving his bachelor's degree from the University of Chicago in 1918, he pursued graduate studies in sociology under Robert E. Park, Albion W. Small, W. I. Thomas, and later Ellsworth Faris.

He began his research career in 1917 as director of research and records of the Chicago Urban League when Park was its first president. As associate director of the Chicago Commission on Race Relations, 1919-21, he had a large part in its famous report, *The Negro in Chicago*.

Beginning in 1921-28 Johnson was director of research for the National Urban League and was editor of *Opportunity*, a journal of Negro life. From 1926-28 the League loaned his services as research secretary of the National Interracial Conference established by sixteen national organizations. After the Conference he organized the existing research data on various aspects of Negro life published in 1930 in the notable volume *The Negro in American Civilization*.

In 1928 Johnson was chosen by Fisk University as chairman of its department of social science. The department under his guidance developed into a research center

on race relations. A series of high-grade research projects were organized which combined theoretical orientation and practical application. Among the publications which followed were *The Shadow of the Plantation*, *The Collapse of Cotton Tenancy*, *The Negro College Graduate*, *The Statistical Atlas of Southern Counties*, *Growing Up in the Black Belt*, *Patterns of Segregation*, *To Stem the Tide*, and *Into the Main Stream*.

In 1946 Johnson became president of Fisk University and began applying the knowledge and wisdom gained from social science research to educational policy. His book *Education and the Cultural Crisis*, published in 1951, contains a statement of his educational philosophy. In April, 1955 he presided at the dedication of the Robert E. Park Social Science Building, named in honor of his early teacher and later colleague.

Johnson's outstanding contributions as scholar, research worker, educator, and social statesman received signal recognition. He was awarded the William E. Harmon gold medal for distinguished achievement among Negroes in science for the year 1930. In 1945 he was cited for distinguished public service by the University of Chicago Alumni Association. He was awarded honorary doctor's degrees by Virginia Union College, 1928, Howard University, 1941, Columbia University, 1947, Harvard University, 1948, and the University of Glasgow, 1952. He was president of the Southern Sociological Society, 1945. His counsel was sought by national and international organizations. For example, he was a member of the United States delegation to the first UNESCO conference in Paris, delegate to the first assembly of the World Council of Churches in Amsterdam, and a member of the Fulbright Board of Foreign Scholarships.

Johnson's career from 1917 until his death spanned a period of tremendous progress of the Negro in this country. And Charles S. Johnson by his research, by his educational leadership, and by his statesmanship, made an indispensable contribution to this great achievement.

ERNEST W. BURGESS

University of Chicago

* * *

British Government. M. W. Hodges, of the Department of Scientific and Industrial Research, has been appointed for two years to the United Kingdom Scientific Mission in Washington for liaison duties in the field of industrial management and social science research. He will welcome enquiries from American industrial sociologists who wish to know of work in their area of interest being carried on in Britain. The Mission's address is 1907 K Street, N.W., Washington 6, D.C.

Interamerican Society of Psychology. The Fourth Interamerican Congress of Psychology was held at the University of Puerto Rico, Rio Piedras, from December 26-30, 1956. The central theme of the Congress was "The Psychology and Psychopathology of Group Behavior." Officers for 1957 are: President, Otto Klineberg, Columbia University; President-elect, Guillermo Davila, National University of Mexico; Vice-president, Gustave M. Gilbert, Michigan State University; Secretary-General, Werner Wolff, Bard College; Executive Secretary, Samuel Pearlman, Brooklyn College; Treasurer, Robert B. Malmo, McGill University. The 1957 meeting of the Society will be held at the National University of Mexico in December.

Luigi Sturzo Institute is holding a contest and offering a prize for a paper on sociology which the judges consider an effective contribution to this field of study both from the point of view of serious research and maturity of thought. The paper should be free from editorial restrictions and ready to go to press. The subject of the work is: "Government interventionism in free countries: A study of the causes and consequences of this type of intervention upon the structure of free countries in the political crises of the 19th and 20th centuries." (The term "interventionism" denotes a system or an excess of government intervention beyond the normal limits of stimulation and integration.) The sum of four million Italian lire will be awarded as the prize for the best paper.

Scholars of any nationality may compete. The works submitted must be written in one of the following languages: Italian, English, French, German, Spanish. Each contestant must submit his paper identifiable by his mark or pseudonym on the title page. The paper must be accompanied by a sealed envelope marked on the outside with the mark or pseudonym and containing the contestant's full name and address, and in addition a brief account of his or her scientific achievements.

The paper must reach the Secretariat of the Institute, in five typewritten copies, not later than August 31, 1958, and the prize will be awarded on or about May 31, 1959. The Committee of Judges will be appointed by the President of the Institute after the final date prescribed for the submission of papers. The Committee's decision will be reached by majority vote and will be final. Other than the prize winning study the Commission may suggest to the Institute those works which it believes worthy of publication. A signed report by the Committee regarding the decision arrived at will be published by the Institute in the most suitable manner within a month after the decision. One

typewritten copy of all papers submitted will be retained by the Institute.

An additional prize of five hundred thousand lire is offered for an essay on "The methodological significance and normative value of the so-called sociological laws: Confronted with physical, economic and ethical laws." Terms and conditions are the same as for the paper, except that the essay must reach the Secretariat of the Institute, in five typewritten copies, not later than December 31, 1957, and the prize will be awarded on or about May 31, 1958. Address: Instituto Luigi Sturzo, Via delle Cappelle 35, Roma.

UNESCO Research Centre, Calcutta. Pandharinath Prabhu, until recently Head of the Psychology Department and Laboratory at the Tata Institute of Social Sciences, Bombay, has joined the Centre at Calcutta as Senior Research Officer. The Centre has been recently established by UNESCO to study the social implications of industrialization in member countries of South East Asia. Realizing that social problems need to be attacked by a team of social scientists from different disciplines working together, the Centre plans to have on its staff as full time members and fellows persons from several disciplines. The Centre has a documentation service and is publishing a bulletin of information of current research in social sciences in the region. The address of the Centre is P. O. Box 242, Calcutta, India.

American sociologists traveling or located in India are invited to visit the Centre and make use of its services. Opportunity will be given to visiting scholars, when appropriate and convenient, to attach themselves to the Centre for brief periods as expert consultants. American sociologists planning to visit India are requested to give information of their intentions to T. H. Marshall, Director of Department of Social Sciences, UNESCO, 19 Avenue Kleber, Paris 16, France.

Meeting Plans of Social Science Societies, 1957.

American Sociological Society, Washington, D. C., August 27-29. Executive Officer: Matilda White Riley, New York University, Washington Square, New York 3, New York.

American Anthropological Association, Chicago, December 27-29. Program Chairman: Sol Tax, Department of Anthropology, University of Chicago, Chicago 37, Illinois.

American Association for the Advancement of Science, Indianapolis, December 26-31. Executive Director: Dael Wolfe, 1515 Massachusetts Avenue, N.W., Washington 5, D. C.

American Economic Association, Philadelphia, December 28-30. Secretary-Treasurer: James Washington Bell, Northwestern University, Evanston, Illinois.

American Farm Economic Association, Asheville, North Carolina, August 25-28. Secretary-Treasurer: L. S. Hardin, Department of Agricultural Economics, Purdue University, Lafayette, Indiana.

American Marketing Association, Detroit, June 19-21. Secretary-Treasurer: William C. Gordon, Jr., 27 East Monroe Street, Chicago 3, Illinois.

American Political Science Association, New York City, September 5-7. Executive Director: Evron M. Kirkpatrick, 1726 Massachusetts Avenue, N.W., Washington 6, D. C.

American Statistical Association, Atlantic City, September 10-13. Secretary-Treasurer: Donald C. Riley, 1757 K Street, N.W., Washington 6, D. C.

Econometric Society, Atlantic City, September. Secretary-Treasurer: Richard Ruggles, Department of Economics, Yale University, New Haven, Connecticut.

Institute of Mathematical Statistics, Atlantic City, September 10-13. Secretary-Treasurer: George E. Nicholson, Jr., Department of Statistics, University of North Carolina, Chapel Hill, North Carolina.

International Population Union, International Statistical Institute, Nordic Statistics Conference, and the **Biometrics Society** (joint meeting), Stockholm, Sweden, August 8-15. Program: Frank Lorimer, American University, Washington 16, D. C.

International Congress of Psychology, Brussels, Belgium, July 28-August 3. Program: Louis Delys, 296 Avenue des Sept Bonniers, Forest-Brussels, Belgium.

International Symposium on the Medical-Social Aspects of Senile Nervous Diseases, Venice, Italy, July 20-21. Program: S. Norman Feingold, 70 Franklin Street, Boston 10, Massachusetts.

Population Association of America, Philadelphia, May 4-5. Secretary-Treasurer: Daniel O. Price, Institute for Research in Social Science, University of North Carolina, Chapel Hill, North Carolina.

Second International Congress of Group Psychotherapy, Zurich, Switzerland, August 29-31. For information: W. J. Warner, 812 Stuart Avenue, Mamaroneck, N. Y.

Ecological Society of America. A Section of Animal Behavior and Sociobiology has been organized to advance, co-ordinate, and assist research and publications on the subject of animal behavior and social organization basic to theoretical science and human welfare, and to act as a liaison agency between workers in the various scientific fields concerned.

At its first organizational meeting, the Section elected the following officers: Chairman, J. P. Scott, Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine; Vice-Chairman, A. M. Guhl, Kansas State College, Manhattan, Kansas; Secretary, M. W. Schein, Pennsylvania State University, University Park, Pennsylvania.

Lester R. Aronson, the American Museum of Natural History, was named as chairman of a committee to continue the search for new publication outlets for papers dealing with Animal Behavior. A. M. Guhl, Kansas State College, was appointed chairman of a Committee on Glossary and Terminology designed to help alleviate the confusion caused by coining new terms or mis-using old ones. W. N. Etkin, Albert Einstein College of Medicine, was named as chairman of a committee to look into the needs and possibilities of publishing a textbook on Animal Behavior and Sociobiology aimed at the upperclass or early graduate student level.

Persons interested in any phase of behavior studies are invited to become members. Any member of any class of the Ecological Society of America may become a member merely by writing to the Secretary of the Section; there are no additional dues. Others may join the Section by becoming members of the Ecological Society (Associate Member, \$2.00) and then informing the Secretary of the Section of their action. Further information may be obtained from the Secretary.

Members of the Section will receive a mimeographed Newsletter, which will include plans for meetings, programs, and other items of interest to behaviorists. In addition, announcements of programs and abstracts of papers will be published in the quarterly Bulletin of the Ecological Society of America. Participation in meetings and programs of the Section is open to members and non-members alike.

National Science Foundation. The Division of Biological and Medical Sciences announces that the next closing date for receipt of research proposals in the life sciences is May 15, 1957. Proposals received prior to that date will be reviewed at the Summer meetings of the Foundation's Advisory panels and disposition will be made approximately four months following the closing date. Proposals received after the May 15, 1957 closing date will be reviewed following the Fall closing date of September 15, 1957. Inquiries should be addressed to National Science Foundation, Washington 25, D. C.

Boston University. William O. Brown, Professor of Sociology and Director of the African Research and Studies Program, is touring seven African countries as a member of a three-man delegation from the Ford Foundation. The delegation expects to confer with government officials and educators in Africa and to learn of programs that can contribute towards improved understanding and co-operation between educational institutions in America and Africa.

Elizabeth Colson is on leave to direct a study of several groups of Tonga people who will soon be moved from their present location in the execution of the Kariba Gorge Project of Northern Rhodesia. Dr. Colson will be affiliated with the Rhodes-Livingstone Institute during this period.

Grace G. Harris, Ph.D., Cambridge University, will be a member of the staff during Colson's absence.

George Horner will join a team of scholars from various American universities in a five-year study of differential responses of selected African societies to Western secular institutions. This study has been made possible by a Carnegie Corporation grant. The team will carry on their research in four West African territories under British and French administrations. Horner plans to be in the Ivory Coast of French West Africa during the year 1958-1959.

The City College of New York. Adolph S. Tomars has been promoted to the rank of Associate Professor.

Sanford Bates has joined the staff of the depart-

ment to offer courses in criminology at the Police Academy. He was formerly Commissioner of Institutions and Agencies of New Jersey, Director of the Federal Bureau of Prisons, and Parole Commissioner of New York State.

Clarence C. Sherwood, lecturer, will also offer courses in the Police Academy.

College Entrance Examination Board once more announces its interest in considering preliminary statements of research plans in the general area of non-intellectual factors related to college success. Since its last announcement in 1956 the Board has supported the following studies in this area: Anne Anastasi, Fordham University: "The Validation of a Biographical Inventory as a Predictor of College Success"; Irving Lorge, Teachers College, Columbia University: "A Review and Evaluation of Criteria of College Success Employed in Past Educational and Psychological Research"; Charles McArthur, Harvard University: "Utilizing Differences in Test Functioning of Public and Private School Applicants for Improving the Prediction of College Success"; C. Robert Pace, Syracuse University: "A Criterion Study of College Environments"; Ernest J. Primoff, United States Civil Service Commission, Test Development Section: "Joint Research into the Effect of Balance among Abilities upon Non-Cognitive Aspects of College Success"; Natalie Rogoff, Bureau of Applied Social Research, Columbia University: "A Study of the Member Colleges of the College Entrance Examination Board"; Nevitt Sanford, Mary Conover Mellon Foundation, Vassar College: "Utilizing Personality Measures to Predict Non-Intellectual Criteria Developed by a College Faculty."

Investigators considering submitting preliminary statements of research interests should first request a copy of the announcement delimiting the nature of the Board's interest. Preliminary statements received by July 1, 1957 will be considered for support beginning on July 1, 1958. Investigators submitting preliminary statements will be informed of the Board's decisions by December 1, 1957. Address correspondence to Joshua A. Fishman, Assistant Director, College Entrance Examination Board, 425 West 117th Street, New York 27, New York.

Community Studies, Inc. Among the social scientists on the Community Studies permanent staff, there are now eight sociologists. Howard S. Becker is completing the field work phase of a study of medical students at the University of Kansas in which he was recently joined by Blance Geer, from Johns Hopkins University. Irwin Deutscher is working with Everett C. Hughes and Helen MacGill Hughes on a book commissioned by the American Nurses' Association, attempting to integrate and interpret the results of the ANA's five-year research grants program. Professor and Mrs. Hughes spent the fall quarter in Kansas City on leave from the University of Chicago. Anselm Strauss of the University of Chicago will spend the spring quarter in Kansas City working with the medical school study.

Thomas S. McPartland, recently head of the department of sociology at the University of South

Dakota has joined the staff and is currently preparing a monograph dealing with the social-psychological aspects of nursing education. His data are derived from interviews with over 200 student nurses in nine schools of nursing in the Kansas City area. Peter New is engaged in a two-year experimental study of the utilization of nursing resources in three Kansas City hospitals under a grant from the U. S. Public Health Service.

Warren A. Peterson, working closely with the Metropolitan Area Planning staff of architects, political scientists, and economists, is undertaking a sociological analysis of the urban power structure.

Elijah L. White, who heads up the Field Survey and Statistical Division, is currently working on a monograph dealing with chronic illness and rehabilitation of the handicapped.

Martin B. Loeb has resigned from the staff to accept a position in the school of social work of the University of California, Los Angeles. Earl Rubington also resigned in order to accept a position at Yale University with the Alcohol Studies group and the Connecticut Commission on Alcoholism.

Teaching appointments are held this semester in the University of Kansas City Department of Sociology by Deutscher, Peterson, McPartland, and White.

Community Studies is collaborating with the University of Chicago's Committee on Human Development in two Kansas City projects. One, under the direction of Elaine Cumming, recently with Cornell University, is a five year longitudinal study of the ageing process and crises encountered during it. Dan C. Lortie, formerly with NORC, is associate director. The other, directed by Julius Roth, is concerned with social process in a tuberculosis hospital.

Dartmouth College. H. Wentworth Eldredge has served for six weeks in The White House Executive Office as a consultant with William R. Jackson, Special Assistant to the President.

Robert Gutman has been awarded a research grant by The Population Council, Inc., to support his studies on the history of vital statistics and vital trends in the United States.

Michael E. Choukas has returned from sabbatical leave, which he devoted to research in the field of public opinion.

Robert A. McKennan was on sabbatical leave during the fall semester.

Fresno State College. A graduate program leading to a Master of Science degree in criminology at Fresno State College was initiated in February, 1957. Frank Boolean is department chairman, and students may specialize in law enforcement and correctional work. Charles R. Guthrie, who is completing doctoral work at the University of Southern California, has joined the faculty as assistant professor of criminology.

Gallaudet College. A new agency, The Central Index for Research on the Deaf, has been established in connection with the Department of Sociology. Anders S. Lunde (Ph.D., Columbia University), Chairman of the department, has been appointed

Director. The Index Office will collect and abstract research studies as well as advise on further research in necessary areas.

University of Illinois. In addition to its regular summer program of courses, during the Summer Session of 1957 the Department of Sociology and Anthropology will offer for graduate students interest in Penology, "Field Instruction and Research in Penal Sociology," to be conducted on the campus at Urbana and in the Illinois State Penitentiaries. The work will be supervised by Daniel Glaser and Ralph England of the University staff, and by the appropriate staff members of the several institutions. *Prerequisites:* Credit in advanced undergraduate courses in Criminology and Penology, consent of instructor, and passing routine employment clearance procedures (including fingerprinting) required by the Illinois State Penitentiary. The State of Illinois will pay the students \$150 per month to defray expenses while at the institutions. *Limited enrolment:* Only four students can be admitted to this course. *Application procedures:* Students must be enrolled in the Graduate College of the University during the summer session, which runs from June 17 to August 10, 1957. Applications for admission to the course will be accepted through May 1, 1957, and should be in the form of letters giving full statements of qualifications. Applications and requests for additional information should be sent to the Chairman, Department of Sociology and Anthropology, 320 Lincoln Hall, University of Illinois, Urbana, Illinois.

Kansas Wesleyan University. Paul C. P. Siu, Ph.D., University of Chicago, has joined the faculty as head of the Department of Sociology. Siu was formerly with the International Institute of Boston and Avon College.

Kent State University. Oscar Ritchie has been appointed Associate Chairman of the Detention Home Survey Committee of the Portage County Mental Health Association, which is serving as an advisory group to the county authorities.

James Fleming has returned after a year of teaching at Ohio State University.

University of Michigan. A grant of \$250,000 has been made by Russell Sage Foundation to support a program of doctoral training and research in social work and social science. Admission of students to the program will begin in the fall of 1957. The program eventuates in a master's degree in social work and a Ph.D. degree in social work and one of the social sciences.

Several special fellowships have been established for the program. Final date for filing applications for the fall of 1957 is May 1. Information on the program and on fellowships may be obtained by writing to David G. French, School of Social Work, University of Michigan, Ann Arbor, Michigan.

The program is under the direction of an inter-departmental committee composed of Chairman, Morris Janowitz, Sociology; Eleanor Cranfield, Social Work; William Haber, Economics; Daniel

Miller, Psychology; and Robert D. Vinter, Social Work.

The Survey Research Center announces the Tenth Annual Summer Institute in "Survey Research Techniques." The regular session of the Institute will be held from July 22 to August 17 with an introductory session from June 24 to July 19, 1957. For further information write to the Center, University of Michigan, Ann Arbor, Michigan.

University of Missouri. Robert Habenstein has served as secretary to the Commission on Mortuary Education, which is making a two-year study of the recruitment, training, indoctrination and sponsorship of trainees in mortuary science.

Edwin Christ, research associate, has completed a monograph on the history of the nursing profession in Missouri. The project was financed by a grant from the Missouri Nurses Association.

Buford Rhea, Marvin P. Riley, and Charles S. Henderson have been appointed instructors.

Robert F. G. Spier is conducting research on tool acculturation among 19th century Chinese immigrants. The work is financed by a grant from the Wenner-Gren Foundation.

Montana State University. Gordon Browder has been reappointed for a three-year period as chairman of the sociology and anthropology department.

Barbara R. Day (Ph.D., University of Washington) has been appointed as assistant professor of sociology to replace Robert James, who resigned to accept a position at the University of Alberta.

Carlin Malouf, assistant professor of anthropology (Ph.D., Columbia University), is continuing work on the Indian land claims cases.

The Fourth Annual Institute on Indian Affairs will be held on April 10-12 in co-operation with the State Intertribal Policy Board and the Montana Committee on Human Relations under the direction of Harold Tascher, Director of the Community Services Laboratory.

The Twelfth Annual School of Public Administration with a restricted enrollment of thirty experienced managers of nature's resources, recruited from the entire nation and under the leadership of the U. S. Forest Service and Montana State University, was held in February.

University of Oklahoma. Reed M. Powell, Chairman of the Department of Sociology, has been granted a Smith-Mundt award as visiting professor of Sociology at the University of San Carlos in Guatemala. Upon his return from Guatemala in September, he will spend a year at Harvard in post doctoral study.

Roosevelt University. S. Kirson Weinberg has been granted a research fellowship to study "The Nature of Intimate Relationships."

St. Clair Drake has returned after spending a year and a half in Liberia and the Gold Coast where, under a Ford Foundation grant, he taught and conducted research.

Arthur Hillman is now Dean of the College of Arts and Sciences.

Rose Hum Lee has become chairman of the department.

Aiva M. Maxey and Bernard Baum have joined the staff as parttime lecturers.

Several members of the department participated in a "Resurvey of the North Kenwood-Oakland Community" funds, for which were granted by the Emil Schwarzhaupt Foundation to the Kenwood-Ellis Community Center.

Rutgers University is offering for the 1957 Summer Session a six-week Resident Workshop in Human Relations, directed by Simon Marcson, associate professor of sociology. Assisting Marcson are W. Neal Brown, Graduate School of Social Work, and Andrew W. Gottschall, Jr., Associate Director of the New Jersey Region of the National Conference of Christians and Jews. For further information write to the Director of the Summer Session, Rutgers University.

Temple University. Leonard Blumberg has been promoted to Assistant Professor. He is currently engaged in the development and teaching of a "General Education" course that seeks to present an integration of the social sciences. He has secured a faculty grant-in-aid for research on leadership in Philadelphia.

Edwin Eames (Ph.D. candidate, Cornell University) and David Matza (Ph.D. candidate, Princeton University) have been appointed as instructors.

Claude C. Bowman has accepted appointment to two advisory committees concerned with mental-health facilities and treatment in the Philadelphia area.

Washington University, St. Louis. Stuart A. Queen has retired from the chairmanship of the Department. He will continue his research and teaching at W. U. until June, 1958, at which time he will become an emeritus professor. The new chairman is Nicholas J. Demerath, previously at the University of North Carolina, Tulane and Harvard.

David Carpenter has returned from a year's leave of absence, which he spent as a visiting professor at the University of Hawaii.

Two new assistant professorships have been filled by Joseph A. Kahl, formerly associated with Harvard University and the University of North Carolina, and Robert Miller, formerly with the University of Washington Far Eastern Research Center.

The *Midwest Sociologist* will be published at Washington University for the next three years with Paul J. Campisi as editor. The University is subsidizing the journal wth an amount equal to that of the Society.

Assistant Professor Arthur Prell, Ph.D., University of Minnesota, is devoting two-thirds time this year to a project for the United States Civil Defense Agency, on which he is the Research Director.

To aid research and related applications in the social and behavioral sciences, a Social Science Institute has been established. N. J. Demerath will direct the institute, which will be administered within the Graduate School of Arts and Sciences, but its services will be available to faculty and students in all divisions of the university. A faculty

board includes: Marion E. Bunch, psychology; Thomas H. Eliot, political science; William Emory, business administration; Werner Hirsch, economics; Richard Lyman, history; Gerald Nadler, engineering; Robert J. Schaefer, education; Robert E. Shank, medicine; Lewis Hahn, Graduate School of Arts and Sciences; Thomas S. Hall, College of Liberal Arts; and Vice Chancellor Carl Tolman.

Wayne State University. The Computation Laboratory is offering its fifth special summer program of three weekly courses as follows: June 3-8, Introduction to Computers and Their Applications;

June 10-15, Data Processing in Business and Industry; and September 9-14, Industrial and Management Computer Applications. For information on the foregoing or on the Master's Program in Automatic Data Processing write to: A. W. Jacobson, Director, Computation Laboratory, Wayne State University, Detroit 2, Michigan.

A conference on matrix computations will be held September 3-6, 1957. Those who wish information or who wish to present papers should address: Wallace Givens, Chairman, Department of Mathematics, Wayne State University, Detroit 2, Michigan.

BOOK REVIEWS



Education and Sociology. By EMILE DURKHEIM. Translated and with an Introduction by SHERWOOD D. FOX. Foreword by TALCOTT PARSONS. Glencoe: The Free Press, 1956. 163 pp. \$3.50.

All the great educational reformers have died disappointed men. On the very year (1808) in which Fichte proclaimed to the German nation that education was the only means of raising themselves, as a nation, and that Pestalozzi was the only educator worth importing, Pestalozzi himself had his coffin made and placed in his school; standing beside it, he delivered gloomy speeches on his failure to wretched disciples. Friedrich Froebel ended no more happily. He was associated with the wrong, or losing, side in 1848 and spent his few remaining years defending himself against official suspicions of socialism. John Dewey, the inspired schoolmaster of America in its Wilsonian interlude, might well have died a disappointed man. For his pedagogical reforms only obscured his surpassing importance as a philosopher, while little of the subtlety of his philosophy passed over into his pedagogical reforms. Rousseau set up *Emile*, a seductive little straw child, who would become a philosopher while all the while he was having fun becoming an artisan. But no education in arts and crafts has ever produced a philosopher. And Rousseau, when he was honest, knew better; his pedagogy was a revenge on philosophy. Nothing pleased him more than to fancy education as a revolutionary instrument, destroying the intellectual and social order by which he had decided to be exquisitely hurt.

Emile Durkheim was no educational reformer. The great reforming theorists of education had been misled by their conception of it as an instrument with which to alter the structure of authority in society. Rousseau and his sort of enthusiast for education are revolutionary *manqués*, children are their proletariat, love is their ideology, and the schoolroom is the good society in microcosm. Durkheim had the sense to see microcosms are never the models of macrocosms; on the contrary, in social life, it is the macrocosm that serves as a model for the microcosm. The school cannot dictate to society; rather, society always dictates to the school. It is a pathetic, and historic, error to treat the school as GHQ for any movement towards the new society.

As a sociologist, Durkheim could not be a revolutionary mind, not even an educational reformer. Where the revolutionary would see conflict of contents, the sociologist tends to see dysfunction. Thus Durkheim, as one of the greatest of sociologists, understands education not in terms of content, but of function: as the main institution communicating the modes of authority from one generation to another. This is what Durkheim means when he writes that "education is a socialization . . . of the younger generation." Thus, in contrast with most of his predecessors, Durkheim emphasizes education as the conservative functioning of society. Treating education as "essentially a matter of authority," Durkheim is free from the characteristic utopianism that renders so much otherwise first-rate literature in education obsolete—and even foolish. Durkheim tells the reader of this small volume that there can be no 'ideal' system of education. With Durkheim, and granted the further development of a sociology of education, the philosophy of education, as a more or less disguised form of utopia-building, finds a logical terminus.

Durkheim raises subtle and important problems, for which this collection of his writings in educational theory and pedagogy offers points of departure rather than discussions. For the contemporary sociologist, his brief references to the teacher as the necessary, exemplary, social type in a secular civilization opens one avenue of discussion; his reference to humanist, or literary, culture as merely another area of specialization points down another important avenue. In short, the book is full of hints at answers, if not full of answers. Perhaps most important of all, the sociologist of education in a mass democracy will want to submit Durkheim's book to the main question pressing upon the entire community of educators: if, as Durkheim says, education is a function of social authority, then what shall we make of the decline of authority that characterizes modern educational institutions on every level, from primary grades to graduate schools? Perhaps the school, the system of education entire, is losing its historic social function? Perhaps, in a mass society, the school cannot be the transmitter of civilized values but only a complex of training programs for various skill groups?

Durkheim cannot be expected to help us with questions of the above sort; he lived just a

little while before questions relating to the fate of ancient institutions (or their functions) in a mass society became all too clear. Nevertheless, *Education and Sociology* contains discussions of continuing import. For one thing, Durkheim definitely wedded his sociology of education to a viable social psychology. As Talcott Parsons puts the matter in his useful Foreword: Durkheim grasped the essentials of the educative process in terms of the "internalization of culture as part of the structure of personality itself, not simply as providing an 'environment' within which the personality . . . functioned." To Talcott Parsons thanks are due for vindicating at last Durkheim as social psychologist, and moreover for encouraging the translation and publication of these essays in the sociology of education. These fragments from the Durkheim canon are well placed within the reach of American sociologists and educators.

PHILIP RIEFF

Brandeis University

Science and Economic Development: New Patterns of Living. By RICHARD L. MEIER. New York: Technology Press of Massachusetts Institute of Technology jointly with John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1956. xviii, 266 pp. \$6.00.

Recent years have seen a spate of books which attempt, with varying degrees of success, to chart economic growth and the ability of man to support himself on this planet. Many of these have been extreme statements emphasizing either unmitigated pessimism over man's destruction of Nature and of the world's finite resources or unmitigated faith in a continuing series of scientific triumphs over the multiple problems man has created simply by living and expanding. By comparison, the same topics have received sober and scholarly consideration in several theoretical and case studies of economic growth such as that by W. Arthur Lewis and the 1955 volumes edited by Abromovitz and by Kuznets, Moore, and Spengler. Most of these previous studies have followed conventional lines, and all are written from the point of view of the specialization of the authors. Where they have wandered beyond such bounds, they have proved on balance most subject to legitimate criticism. The principal exception is the well-known volume by Harrison Brown, *The Challenge of Man's Future* (Viking, 1954). Readers who, with Brown, have examined man's past and present and, in a final chapter, have attempted to discover the dimensions of his future will want to expand this vision in the pages of Meier's *Science and Economic Development*.

I use the word "vision" advisedly. It is not

intended to connote occult science. Meier's facts are lucidly presented, and his argument follows clearly from his data. His vision is that of the seeing and perceptive eye and the imaginative and critical mind. His science is not physical nor biological nor social but general and his focus is on a situation to which he brings the data and viewpoint of all fields which are relevant, including those usually designated as the humanities. He omits only political organization and does so for reasons he states. He deals not with the development potential of countries or regions but of the world as a whole. His background is the present and his orientation is to the future. He is inventive in the sense that his interpretations are freed wherever possible from the constrictions of current formulae and directions. The result inevitably is a book which will introduce most specialists to new lines of thought based on developments in fields beyond their own areas of major competence, and one which will inevitably provoke scholarly controversy.

The components of Meier's book are familiar. Among the principal topics considered are consumption and production patterns, the population base, fuels and other natural resources, food requirements and practices, technology, urbanization, and economic and social organization. Starting with an assessment of the current situation, including present knowledge and experimentation, each area is then described in terms of the probable or possible changes in a future world committed to economic development and the worldwide attainment of at least a minimum adequate standard of living. In most cases the author is careful to spell out the hindrances to the attainment of the goals he has posited. One of the merits of the book is its consistency, which is related to the author's evident willingness to question at every point the validity of his own interpretations.

Space limitations prevent either a resume of the book or any detailed list of questions and reservations raised. Fortunately, in place of the former, anyone who is interested will find a brief but thorough recapitulation following the final chapter. It may also be noted that Meier sees the need for a full involvement of social scientists in planning, development and administration based on his view that the prime tasks if the potentialities of the new technology are to be realized are in the solution of problems of human relationships. Technological answers will have sharply reduced value, or none at all, unless there is a radically new approach to the internal organization of developing societies, particularly as these face the crises of transition periods.

How real are Meier's new directions? Nuclear

energy, increasing population control, protein from micro-organisms, the automatic factory, swollen urban conurbations—all these are believable. They are dimensions at least partially in view. But can acceptance of a society dominated by "the scientist-executive" be anticipated or, if necessary, be engineered? If so, is there really "little doubt of their capacity to manipulate men, money, and materials . . . to achieve an eventual surplus, after providing at least a minimum adequate standard of living for all the population?" (p. 205) And how long is "eventual?" This raises the whole problem of the feasibility of gradual economic development, a problem to which Meier alludes but which he does not answer in a way convincing to me. These and many more such questions will occur to any reader. But what can he do against the author's disarming admission that "This exercise in ingenuity, using science and technology for synthesizing new tools of economic development while permitting moderate rates of social change, may be quite unrealistic for many underdeveloped areas?" (p. 223)

A brief review can give no indication of the host of carefully weighed but challenging statements in this book. The study itself is the best possible argument in support of Meier's contention that "What is needed now is a scholarly environment that encourages serious analysis of the future." Social scientists, including sociologists, have a major contribution to make to any such analysis. As yet very few have taken up the challenge and the risks it involves.

VINCENT HEATH WHITNEY

Brown University

Sociology in the United States of America: A Trend Report. Edited by HANS L. ZETTERBERG. Paris: UNESCO, 1956. 156 pp. UNESCO Publications Center, 152 W. 42 St., New York 36. \$2.50, paper.

Surveying the salient developments in the discipline since 1945 for both a foreign and domestic audience, *Sociology in the United States of America* is one of a trilogy of trend reports (with companion volumes in economics and political science) by which UNESCO has sought to depict the general character of American social science. The editor has chosen a "topical" rather than "theoretical" organization, thereby omitting separate discussions of popular but "theoretical" subfields, e.g., social psychology, social organization, social pathology, and social change (p. 19). Except for Zetterberg's "A Guide to American Sociology, 1945-1955," the book contains nineteen articles describing sociological research methods, systematic theory, the sociologies of political behavior, law, military life,

education, knowledge and science, industry, mass communication, religion, professions, marriage and the family, small groups, rural life, urban life, social stratification, crime, ethnic relations, and mental health.

While these informative chapters outline recent research problems and methods, they fail, on the whole, to derive generalizations of empirical findings and to present theoretical formulations which are not coercively selected from systematic theory. By far, the outstanding contributions are S. M. Lipset's report of recent political behavior studies and A. W. Gouldner's critical analysis of systematic theory.

This volume conveys the impression that all of American sociology is a vast research enterprise preoccupied with a multitude of discrete problems but devoid of basic unifying assumptions, principles, and ideas. Even the recruitment of half of the contributors from the present staff members or recent Ph.D.'s of one institution (Columbia University) does not facilitate a statement of the fundamental consensus of American sociology. Nor is Zetterberg's introduction a corrective. His citation of supposedly erroneous notions about the discipline is only an oblique reference to common intellectual commitments, subordinate to his direct concern with the academic organization of teaching and the financial support of research. (Admittedly, a European frame of reference without equipment in the intellectual history of American social science may be a disadvantage in attempting to isolate the peculiarly indigenous ideas of American sociology.)

At least three simple generalizations about American sociological research over the last decade are suggested by this trend report: (1) systematic theory has achieved acceptability as an organizational device and as a mark of scientific maturity and respectability; (2) the traditional a-historical methodology of the discipline has obstructed efforts—even when sociologists desire—to approach problems from an historical perspective; (3) sophisticated quantitative research procedures have become virtually sociologically ubiquitous, except perhaps for the fields of sociological theory and the sociology of knowledge.

GISELA J. HINKLE

Columbus, Ohio

The Radical Novel in the United States, 1900-1954. Some Interrelations of Literature and Society. By WALTER B. RIDEOUT. Cambridge: Harvard University Press, 1956. ix, 339 pp. \$6.00.

This is an evocative and nostalgic book. For many—and particularly for those whose lives

were drastically affected by the emotional and intellectual travail of the thirties—it will serve as a sharp reminder of the anguished doubts and profound self-examination which beset an entire generation of sociologists. Much of what has been already forgotten, or which simply exists on the periphery of convenient recollection, is contained within this book.

What the writer is attempting to do is to trace the development of the rising idiom of rebellion in American literature from the turn of the present century. This book, however, is neither a sociological tract nor an attempt to appraise in sociological terms, as we would recognize them, the growth and development of contemporary radical literature. The book, nevertheless, has a distinct value for sociologists and provides an illuminating point of departure for a systematic and profound appraisal of the institutional patterns and ideological forces which have tended to shape a peculiar literary tradition. The author, for example, does considerably more than simply indicate the progressive growth of an indigenous literature of protest. He presents in massive detail a rich mosaic of the character of the political and economic forces which have served to motivate such an expressive pattern. Further, although he chooses for principal analysis the novel as a peculiar *tour de force*, he does not neglect a variety of other writings, as contained within periodicals and reviews now long forgotten, which helped to carry forward a significant movement of literary dissent. The analysis appears to focus upon four major areas in the development of this tradition—the decades before World War I (reminding us, as the author put it, that "the twentieth century was once young"), the confused period of the twenties and the subsequent depression in which literary realism attains a dominant stature, the period of the great polemic preceding World War II in which the cliché of "art as a class weapon" conveyed a vital urgency, and, finally, what the author chooses to call the "long retreat" of the present.

Certain basic insights appear to stand out in the author's treatment. Significant, as a symptomatic index of artistic expression, are the peculiar ethico-religious forms which early twentieth century socialist writing assumed—something, very likely, that would have been emphatically and indignantly denied by the writers themselves—in the reification of strongly humanitarian and ethical concepts derived from the preceding century. Further, these early writers, despite their impassioned and muckraking realism, assumed paradoxically an inverted form of the typically American success story or Horatio Alger legend. Here the rich youth, not the

poor rural lad coming to the city to seek his fortune, finds the fulfillment of his destiny after harrowing vicissitudes in the ennobling vision of the Cooperative Commonwealth. Here, too, the peculiar mentality of the age is mirrored in the writer's preoccupation with five major concerns—conversion, the coming of Socialism, labor struggles, the decadence of the rich, and that titillating favorite of our Victorian forbears, prostitution. The vitality of this form of literature in the present and for the immediate future, the writer affirms, rests with the independent protestant and not with the doctrinaire revolutionary. For, says the author, the primary responsibility of literature is not to identify itself with any particular credo, whether political or religious, but rather to inquire relentlessly and ceaselessly into the "human condition."

This is not a sociology of art or literature. It attempts in no way to answer those problems which this reviewer, for example, posed some years ago in his analysis of the essential problems of a genuine sociology of literature and art-forms. However, it does provide some of the rich data, within a limited and restricted sphere, with which such a sociology eventually may be fashioned. For too long, it appears, the field of sociology has neglected one of the most vital areas of human investigation.

HERBERT A. BLOCH

Brooklyn College

When Prophecy Fails. By LEON FESTINGER, HENRY W. RIECKEN, and STANLEY SCHACHTER. Minneapolis: University of Minnesota Press, 1956. vii, 256 pp. \$4.00.

The behavior of a small group of people who believe that they have been forewarned of the impending end of the world would be dismissed by many social scientists as interesting but hardly researchable. The authors of *When Prophecy Fails* are to be commended, not only for undertaking a difficult task but for doing it remarkably well.

The authors learned through a news story of the existence of the "Seekers," who claimed to be in communication with beings in Outer Space. From these beings the group had received a warning that on December 21 the earth would be subject to a cataclysm comparable to the Flood. The social scientists saw in this social movement an opportunity to test certain theoretical ideas about the behavior of individuals in social movements, ideas developed from the study of historical records of millennial and messianic movements.

Using the participant-observer method, this research team collected an impressive body of

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data in the brief span of two months. Their research resulted in convincing, if not definitive, confirmation of their hypotheses. At the same time, it constitutes a stimulating example of the adaptation of method to a significant subject, rather than the selection of the research topic because it fits the latest fads in methodology.

The hypotheses of the study state the conditions under which one might expect to observe increased fervor following the disconfirmation of a belief. The five conditions postulated are:

1. A belief must be held with deep conviction and must have some relevance to action.
2. The person holding the belief must have committed himself to it; that is, the believer must have taken some important action that is difficult to undo.
3. The belief must be sufficiently specific and sufficiently concerned with the real world so that events may unequivocally refute the belief.
4. Such undeniable disconfirmatory evidence must occur and must be recognized by the individual holding the belief.
5. The individual believer must have social support.

This reviewer feels that the history of the group and case studies of individual members confirm these hypotheses. The general theory from which these hypotheses are derived is concerned with consonance and dissonance among cognitions—opinions and beliefs held by an actor. *Dissonance* produces discomfort and results in attempts to reduce or eliminate the dissonance. One way of reducing an extremely painful dissonance, such as that produced by the irrefutable disconfirmation of a prediction, is to persuade more and more people that the system of belief is correct. In the extreme case, "If everyone in the whole world believed something there would be no question at all as to the validity of this belief." (p. 28.) The five specific hypotheses cited above spell out the conditions under which this method of reducing dissonance to the point where the believer can live with it will be used. The crucial test is whether proslaying increases after disconfirmation of the belief, and in this case it did.

LEWIS M. KILLIAN

The Florida State University

Group Differences in Attitudes and Votes. A Study of the 1954 Congressional Election. By ANGUS CAMPBELL and HOMER C. COOPER. Ann Arbor: Survey Research Center, Institute for Social Research, University of Michigan, 1956. v, 149 pp. No price indicated.

Competitive Pressure and Democratic Consent. Michigan Governmental Studies, No. 32. By MORRIS JANOWITZ and DWAIN MARVICK.

Ann Arbor: Bureau of Government, Institute of Public Administration, University of Michigan, 1956. viii, 122 pp. \$2.75.

Survey methods, like any other tool of social science, may be used for "pure" research or for evaluative purposes, and may be directed at specific or general problems. The two books considered here, although both based on work of the Survey Research Center (SRC) of the University of Michigan, illustrate the range of problems at which academic survey analysis may be aimed.

Group Differences in Attitudes and Votes, by Campbell and Cooper, is a scientific analysis of a number of relatively specific problems. The addition of political questions to an SRC economic survey in 1954 made possible the cross-tabulation of voting intentions and political attitudes by sex, race, age, religion, size of community, education, occupation, union affiliation, family income, and party identification. Many data are presented, and some general interpretations of the significance of group membership are added. Examples of interesting findings are: (1) education is associated with internationalism; (2) Catholics were more pro-McCarthy than other religious groups; (3) Republicans appeared to become more internationalist after Eisenhower became President; (4) older people tend to have more definite party identifications than younger people; (5) variation of the vote with education is least in open-country areas. These and many other findings constitute useful raw material for the study of various problems and hypotheses; their usefulness would be increased, however, by the presence of an index.

Competitive Pressure and Democratic Consent, by Janowitz and Marwick, is an evaluative analysis of a very general problem: the proper functioning of democracy. Its aim is to evaluate the choices of the American public in the 1952 Presidential election in terms of an explicit theory of democracy. The authors' attack on this question should be of interest to sociologists for two reasons: first, because the functioning of democratic government is a vitally important social problem; and second, because the authors approach that problem with the aid of our growing knowledge of political behavior and communication processes.

The key concept of this study is "democratic consent." This refers to the process by which voters not only choose among alternative leaders, but also manifest their involvement in, and acceptance of, the processes of choice themselves. In evaluating the 1952 election, the authors pose five criteria for the quality of an election:

- (1) A high level of citizen participation, resulting from competition;

- (2) High political self-confidence and self-interest (in a broad sense) in the outcome;
- (3) Effective political deliberation on the issues and candidates;
- (4) Non-monopoly of the mass media;
- (5) Independence of interpersonal pressures from mass-media influences.

One may ask whether these criteria are sufficient, since the acts of conventions and candidates also make a difference; the authors at least make a convincing case that these criteria are more realistic than those of "mandate" theories of representation. In any case, the use of these criteria as a framework for the study should stimulate further debate as to the proper premises for political sociologists who wish to evaluate the democratic process.

The authors have brought a surprisingly large amount of information from SRC's 1952 survey to bear on the problem; their participation in the planning of the survey undoubtedly helped make this possible. Their verdict on the 1952 election is generally favorable. At the same time their analysis reveals segments of the electorate who did not participate in a process of democratic consent (Negroes and the lower-lower class), as well as groups who may have been relatively more subject to manipulation than others (the pro-Eisenhower changers).

In carrying out this analysis, the authors found it necessary to generalize the "cross-pressure" approach to include the interaction of sociological and psychological variables. A section devoted to this model may be considered as a digression which contributes to the development of the "pure" theory of voting behavior.

In summary, although this ambitious study necessarily leaves many questions unanswered, it constitutes a challenge to political sociologists to formulate their evaluative criteria clearly and to undertake further research along related lines.

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Political Behavior: A Reader in Theory and Research. Edited by HEINZ EULAU, SAMUEL J. ELDERSVELD, and MORRIS JANOWITZ. Glencoe: The Free Press, 1956. xii, 421 pp. \$7.50.

Analyses of political phenomena which use a behavioral approach focus on the predispositions and interaction patterns of persons and groups. Events, institutions, or ideologies are relevant categories insofar as they aid in establishing the significance of behavior—overt or symbolic. The requisites of behavioral analysis are systematic theory, interdisciplinary focus, and an

empirical approach. An individual's orientation toward politics may be specified by the structure of his political beliefs, the modes of his participation, and the dimensions of his psychological involvement. Analysis proceeds by delineation of the institutional terrain in which decision-making occurs, and it hinges in critical ways on a specification of the instrumentalities—men, facilities, and strategies—by which power is wielded. In skeleton outline, these are the basic features of political behavior analysis, which are effectively displayed in some 41 papers by 54 authors brought together in this engrossing and useful volume.

The editors have aimed at a reader that can fruitfully be used either in under-graduate courses or graduate seminars. They have done a hard job extremely well. Their task was to select papers of high quality, group them under appropriate headings and suggest the basic modes by which analysis proceeds. Although they claim a pragmatic and eclectic purpose, they have given us more: enough by way of formal categories and relationships (e.g. requisites, structures, arenas) to provide a sense of sequential development; not so much formalism as to obscure the sense of coming to grips with the substance of politics. Judged by these criteria, the first section of the reader, where three precursors of the current behavioral approach are appropriately represented—Graham Wallas, Arthur Bentley and Charles Merriam—is the weakest section, interestingly enough.

The first feature which distinguishes this volume is the forthright manner in which virtually all authors make their contributions to the literature of political science. More than two-thirds of the authors are political scientists. Their focus on interaction processes, their attitude that political theory is a differentiated but integral part of a larger social theory, and their assertion that theory must be operationalized and that empirical findings need substantive interpretation: these are viewpoints not so widely shared in their profession generally. Yet they do not sound like isolated rebels, carping at the scholarship of others. They do not imply that the behavioral approach will displace all other types of political analysis. Instead, they are interested in results; many of the papers break ground too long ignored or challenge comfortable assumptions too widely used. Almond's suggestive paper on the utility of the concept of "political culture" is a case of the former; the latter is exemplified by Lane's revealing article on the implicit views about political character typically found in theoretical discussions of "representation" or the resolution of "group pressures." In no case, however, is the

author's aim polemical; instead, the purpose is to add to the corpus of knowledge about politics.

But this distinctive feature—the non-defensive tone with which empirical methods and modern social science perspectives are pressed into productive service—would be less impressive if it were not for a related feature. This is a reader with a political science flavor. Both the editors and contributors manifest a conscious concern with a number of classical problems of political thought. There is interest in the subject matter of politics—the outlook and activity of voters, legislators, lobbyists, and bureaucrats—for its own sake rather than as a convenient field in which to explore the operation of social and psychological mechanisms. In turn, this means that many of the contributors accept a challenge to evaluate their findings as empirical approximations to stipulated institutional norms—of deliberative "consent," "responsible" officialdom, self-imposed restraint in wielding power, and reciprocity in effecting political compromise.

DWAINE MARVICK

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Modern Public Opinion. By WILLIAM ALBIG. New York: McGraw-Hill Book Company, Inc. 1956. xii, 518 pp. \$6.50.

This is an up-dated, revised edition of Professor Albig's well known *Public Opinion* published in 1939. It is a new book in the sense that it takes cognizance of most of the important research on public opinion and communications which has appeared since 1939. It is not new, however, in its perspective. With minor variations, the structure of the current volume is very little different from its predecessor. This is principally a reflection, as Professor Albig notes, of the lack of progress made over the last two decades in the development of a theory of public opinion or of communication. At the same time, however, one can not help but feel that the author might have contributed to advancing theory had he sought to modernize the frame of reference in which he views his topic.

The book is clearly intended as a text for introductory courses in public opinion and communication. It considers the nature of public opinion, the psychological processes involved in opinion formation, the measurement of opinion, opinion change and gives separate attention to the evolution of each of the major mass media of communication. The book is comprehensive in its coverage, is interestingly written and the student reader can be expected to become acquainted, if not thoroughly familiar, with the

significant and some of the insignificant research done on the subject matter.

It is perhaps unfair to demand that a text book give the student the wisdom to evaluate the relative importance of the many topics that it covers and the considerable research that it reviews. However, it seems unfortunate that this book covers too many things too sparingly and too few things in any depth. As important a book as Katz' and Lazarsfeld's *Personal Influence* for example, is reported in a single page. It is described as a "very significant study," but the source of its significance is not discussed nor is its principal attempt at a theoretical contribution elaborated upon.

The value of this book, like most text books, is likely to be determined by the quality of the instruction which accompanies it and by the amount of supplementary reading into primary sources required of the student. Alone, it is not likely to stimulate a scholarly interest in the study of the important facets of contemporary life with which it deals.

CHARLES Y. GLOCK

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The Focused Interview. By ROBERT K. MERTON, MARJORIE FISKE, and PATRICIA L. KENDALL. Glencoe: The Free Press, 1956. xxii, 186 pp. \$3.00.

This book is intended as a specialized training manual for interviewing of a particular type. The focused interview differs from other kinds in that it is aimed at discovering the detailed reactions of respondents to situations in which they are known to have been involved—they have seen a film, read a pamphlet, heard a radio program, taken part in a rally, riot, or disaster. The general procedure in such cases has often been to gain a loose subjective recall of the situation, or a *post factum* interpretation based upon the present introspection of the subject. The focused interview is designed to encourage retrospection by providing cues from the known situation, consistently referring to that instance and the then-present stimuli. The interview is *focused* in the sense that questions are concentrated on the subject's reactions and descriptions of a specific situation rather than on the broader topics of what the situation actually was like or the general experiences of the respondent. A second general feature of the focused interview is that the significant aspects of the situation have been analyzed prior to the interview, hypotheses have been formulated, and the interview guide is designed to investigate those variables that will serve as a test of the hypotheses. It is also pointed out by the authors that

unanticipated responses during the interview can serve as the bases for new hypotheses.

In order to achieve these ends the focused interview must (a) tap a wide range of responses, both anticipated and unanticipated, (b) be specific in detail and linked to the particular stimuli in the past situation, (c) probe deeply into the subject's affect and involvement, and (d) reveal the personal context in which the situation and the reaction took place. A large part of the manual is concerned with detailed instructions and examples of how to achieve these four criteria for the most productive focused interview.

The "How to" discussion lists such "Do's" and "Dont's" as the following: don't overstructure, don't try for sheer recall of the stimuli, but always hook it to the subject's response, don't cut off digressions too soon, don't stick too closely to the interview guide, don't coerce the subject, don't shift from one topic to another too rapidly, don't introduce a topic unless you want to explore it, keep questions in the past tense, compare the central situation of the interview with similar ones to elicit affect, try to establish the identification of the subject with others in the situation, use unstructured questions that contain explicit references to the situation.

The volume is concluded with a very interesting chapter on techniques used in the group interview, covering such topics as the setting, the size and composition of the group, spatial arrangements, advantages and disadvantages of the group interview, and procedures for dealing with reticent and overly loquacious interviewees. The final chapter deals with certain general problems in interviewing: opening the interview, explanation of purpose, defining the roles of the interviewer and the interviewee, controlling the expression of interviewers' sentiments, handling of interviewees' questions. There is an analytical table of contents provided in place of an index.

Much like a cook book, it is difficult to evaluate an instructional manual without trying it out—it reads well, but what kind of a product comes out of the oven? Unfortunately, I have not been able as yet to use the book for training students. On the basis of reading only, my best guess is that the manual will be highly effective: it does not belabor the obvious, it does not deal in vague generalities, it affords examples of both good and bad interviewing techniques and is constructively critical of the unsuccessful attempts.

Two tentative criticisms may be made, both of which are subject to the test of student reaction in the training situation. The almost ex-

clusive use of illustrations from a study of reactions to World War II films—Kate Smith and the war bond drive also appear from time to time—does provide a certain continuity for the discussion, but this advantage seems far outweighed by the dated flavor pervading the book and the unintended and unwarranted implication that the focused interview is limited to communications research. Further, it does not seem quite necessary to require the student to grapple with such phraseology as: "cued transitions, reversal transitions, mutational questions, the continuant remark, specification of the evocative situation, unanticipated symbolisms," although they should appreciate the distinction between "dead and pregnant silence."

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Das Soziale im Leben und im Denken. By LEOPOLD VON WIESE. Köln und Opladen: Westdeutscher Verlag, 1956. 79 pp. DM 6.

The skillful presentation of the basic and familiar ideas of von Wiese's sociological system leads up to a definition of the present situation from the vantage point of German cultural Liberalism. Three essays deal with the nature of individual and collective life, with the private and public sphere in human existence, and with rigidity and abundant diversity as principles of two social systems. It is interesting that von Wiese now prefers to distinguish between "circles" and "the mass" instead of "abstract" and "concrete" masses. Similarly he proposes the term "corporate bodies" for his former term "abstract collectivities." The pointillist, multi-colored style of reasoning is all pervasive and polemical against the concept of society as a structural whole undergoing historical change. In the last analysis there are only myriads of inter-personal relations and a few universalist principles boiling down to "association and dis-sociation." Characteristic is the point of departure: "in the last analysis there exist but three essential problem areas for man: his relation to the godhead, . . . the articulation of his internal life, . . . and inter-human relations." (p. 8). Man's relation to nature, science and technology, would seem less essential.

Politically interesting is the somewhat misanthropic bent of von Wiese's cultural liberalism. He pleads for the cultivation of privacy against the schematization and standardization of public life. His critical strictures against "popular culture," the mass media of communication, the celebrities of the market place are informed by a profound disdain of the masses.

His appeal is addressed to the "true elite." Shades of Nietzsche and Ortega y Gasset! "In the last analysis one of the chief causes (of the negative features of modern urbanism) is the existence of the altogether too many." (p. 70). Of course, he avers against "the blind madness of hydrogen bombs, the slaughter of millions and millions of people" (p. 74). Still, he does not warn against generals and such but against the truly committed idealist as presumably "he wishes to sacrifice not only himself but also others." Also he advises "well meaning philanthropists" that "the natural and social laws, which determine the path of nations (*der Völker*) are stronger than (their) will." (p. 74). America and the Soviet Union allegedly have in common the elimination of privacy and of the enriching enjoyment of solitude. In America technology, the mass media, commercialized leisure produce a type of collectivization; whereas in Soviet society the evils of totalitarian domination produce for different reasons the same result, namely "to leave less and less scope to the self-determined development of individual privacy." (p. 65). The images implementing such enriching privacy as juxtaposed to the negativism of public life are "the quiet conversation of lasting effect in a small circle" (p. 71), the "solitude of the home," or the "solitary walk through the quiet forest." (p. 67). For Germany he proposes the cultivation of "a style of harmony between public life and privacy." (p. 68). The stereotyped construction must overlook the scattered farm settlement in the United States as over against the overcrowded village in Germany and the widespread home-ownership as over against the predominance of the tenement house in Germany. Modern philosophy, art and poetry, basically constructing the affect of melancholia in response to the world as is, come in for the following reprimand: "The philosophical nihilism, the alienation of art from the naturally beautiful, the increasing scientificism of poetry and the artificially exaggerated pessimism of the intellectual fail to do justice to the nostalgia of the soul." Why it should be the calling of philosophers, artists, poets and intellectuals to do so remains an open question. Von Wiese's positive suggestion for Germany in danger of submitting again to the guiding idea of rigidifying uniformity: "one must make again proper use of the best forces of tradition precisely in order to fashion the new out of them. . ." (p. 79).

Whereas classical liberalism juxtaposed public life, publicity, and the market place of ideas to religious dogmatism, ecclesiastic obscurantism, star chamber proceedings, secrets of state and bureaucracy, German Neo-Liberalism as repre-

sented by von Wiese sees nothing hopeful in public life, and dramatizes the values of intimacy and small group experiences and solitary privacy. For the rest it relies "on the best forces of tradition." The mood is in agreement with the general restoration of Western Germany.

HANS GERTH

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Community Organization: Action and Inaction.

By FLOYD HUNTER, RUTH CONNOR SCHAFER, and CECIL G. SHEPS. Chapel Hill: The University of North Carolina Press, 1956. xviii, 268 pp. \$5.00.

In this book Professor Hunter and his associates have given another useful report on power and leadership. It is a fitting sequel to the senior author's study of power blocks as reported in his *Community Power Structure*.

Community Organization: Action and Inaction analyzes a "study of a study," which involved a research team from the University of North Carolina's Institute for Research in Social Sciences, and a group of leaders in Salem, Massachusetts. The Salem group conducted a self-study of their community's health needs; the research team studied the processes of community self-study.

Although there was some local interest in health problems in Salem, the self-study was started only after the North Carolina group suggested it to a few of the Salem leaders directly involved in health affairs. In a real sense the research team instigated the self-study, and then proceeded to systematically record the processes by which decisions and action programs were formulated and carried out. Since both action and inaction were considered equally significant, there was a conscious effort by the research team to avoid professional advice or direction. This approach of observation without participation was difficult to explain to some of the committee members. Closely related was the problem of getting the participants to "behave naturally" while being observed.

Approximately half of this book presents evidence and observations designed to define the social structure of Salem. The remainder describes the creation and composition of the self-study committee, the groping efforts to determine valid goals, its eventual successes, and its failures.

In the reviewer's opinion, this is an excellent book. The authors continually emphasize the importance of principles and generalizations, without losing sight of the personalities of the individuals involved in community functioning. Their description of "persons who influence

power decisions," while remaining in the background, is especially valuable. The book is important because it discusses in detail community power structure—an area rather generally ignored by many urban sociologists. It is useful because it provides observations which can be valuable in the study of other cities, and in the development of an integrated theory of community leadership. Particularly significant are the conclusions concerning the limitations of the self-study approach. In Salem, at least, there was, on the part of many members of the community, a laggard willingness to face up to problems in a concerted fashion, and, among many of those aware of the needs of the community, a resignation to failure and inertia as being preferable to ill-timed and under-supported action. Moreover, observe the authors, "We doubt that many communities are prepared to come to grips with some of the heavily charged questions, but if they do not, doubt must be cast upon the efficacy of the method of self-study" (p. 257).

ROBERT H. TALBERT

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Service and Procedure in Bureaucracy: A Case Study. By ROY G. FRANCIS and ROBERT C. STONE. Minneapolis: The University of Minnesota Press, 1956. vii, 201 pp. \$4.00.

This study produces mixed feelings. On the one hand, propositions are stated with a clarity and tested with a degree of precision rare in the literature on bureaucracy, and inferences are drawn with admirable restraint and modesty. On the other hand, the criticisms which I must make suggest to me that more preresearch analysis might have produced a more satisfactory study.

Two propositions, drawn from the 'classical' theory of bureaucracy as put by Weber and expanded by Merton, are the foci for analysis. First, that bureaucracy implies a 'procedural orientation' (i.e., tendency to make rule-following paramount over service to clients). Second, that bureaucratic organization implies 'impersonality' in inter-employee relations.

It seems to me that the test of these propositions, as used by Weber, Merton, and others, *patently* calls for a comparative framework (this might, of course, be a comparison of units within a single organization as in Gouldner's *Patterns of Industrial Bureaucracy* or Blau's *The Dynamics of Bureaucracy*, both mentioned by Francis and Stone as converging studies with their own). This since the fundamental questions raised by these writers are whether 'more bureaucracy' implies more emphasis on procedure and more impersonality than 'less bu-

reaucracy.' The authors, however, see comparative study as but *one* of the means of testing these propositions, one they could not use due to 'limitations of time and money.' Thus, the propositions are reformulated to fit the authors' conception of their means—a case study of a local office of the Louisiana Division of Employment and Security comprised of ninety-six people considered as a 'whole.' They become, first, that a *dominant* procedural orientation is found, and, second, that close personal relations *do not* develop in a bureaucracy.

The point is this: First, these are *different* propositions, and propositions which I doubt would be defended by the 'classicists.' The alternative propositions—that conflicting orientations and both personal and impersonal relations will be found to some degree in any bureaucracy—are not only consistent with some readings of the 'classics' (as the authors themselves suggest), but I would hold the only reasonable interpretation of the 'classical' position relative to a single organization considered as a 'whole.' This is clear from the context of 'classical' thought about bureaucracy which is a concern for rationality in the modern world. One of the conditions of rationality, according to the 'classicists,' is finding some balance between discretion and conformance, personal involvement and indifference, and a major modern attempt to find this balance is illustrated by the bureaucratic mode of organization. Second, in order to justify their reformulation, Francis and Stone interpret 'classical' handling of the 'ideal type' position in a manner never *used* by Weber or any other 'classicist' to my knowledge. Thus, it is suggested that the 'ideal type' of bureaucracy is used to sort out 'bureaucracies' from 'non-bureaucracies' as if this sorting operation would allow a total description of the behavior of bureaucrats rather than an analytical abstraction of *tendencies* to behave. It is clearly the latter, I would hold, which is *always* at issue in 'classical' writings on bureaucracy; the problem being under what conditions, to what degree, and with what consequences are a procedural orientation and impersonal relations to be found.

Five tests (based on observation of employee-client interviews, interviews of clients and employees, and analysis of official agency literature and the use of certain job placement forms) lead to the conclusion that the first proposition (a dominant procedural orientation will be found) is invalid, and that employee actions and attitudes exhibit both procedural and service orientations. Interviewing further reveals that the second proposition (close personal relations between employees will not be found) is shaky, and that many close personal relations develop among employees. It is inferred that the

'classical' theory of bureaucracy needs reassessment.

The reassessment makes three major points. First, 'bureaucracy' is best viewed as a 'principle of social organization,' rather than a type of organization, variably present in concrete social systems. But this is the 'classical' position. Second, an alternative organizational principle, 'professionalism' is latent in situations where routine procedures cannot be substituted for individual skills and competes with 'bureaucracy' in the structuring of employee relations to procedures. Third, neither 'bureaucracy' nor 'professionalism' imply any negation of inter-employee relations developed on the job from those developed off the job. I have suggested that the first part of this proposition needs a comparative framework to be answered. On the basis of their reassessment, the authors suggest reformulations of their resultant hypotheses (regarding the presence of conflicting orientations and types of relations in an organization) in the direction of specifying the *conditions* under which a procedural orientation and impersonal relations will develop in a social system exhibiting the bureaucratic mode of organization.

These reformulated hypotheses connecting type of work, organizational position, and emphasis on procedure, and bureaucracy, professionalism, and segregation of spheres of personal relations in large-scale organizations are worthy of serious consideration. But given the framework of the study, with its pronounced emphasis on illustrating the confusion of the 'classicalists' and its tendency to leave 'bureaucracy' in an unanalyzed condition of action and attitude until after research was finished, these hypotheses remain only plausible conjectures. With the authors' considerable facility for translating theory into testable propositions, this is only to be regretted. And one wonders whether a more positive reading of the 'classics' would not have suggested these (or these types of) propositions, connecting specific conditions involved in bureaucratization with specific outcomes in belief and behavior, as those bearing investigation in the first place.

SHELDON L. MESSINGER

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The American Business Creed. By FRANCIS X. SUTTON, SEYMOUR E. HARRIS, CARL KAYSER, and JAMES T. TOBIN. Cambridge: Harvard University Press, 1956. xii, 414 pp. \$6.75.

This volume is a painstaking and dispassionate analysis of the ideology of American business. As a case study of an ideology, it is rare indeed;

as a model of method, it is outstanding; and as an instance of cross-disciplinary research, it is cogent and exciting.

The joint work of three economists and a sociologist (who is given top billing), this smoothly written and closely reasoned volume seeks to answer the question, "On what theory can the themes, symbols, arguments, which form the business ideology be explained?" In characteristically systematic style the authors start their quest for an answer with a general theory of the role of ideologies in social life: they find it in "the strain and conflicts inherent in every institutional position in a complex society." The major themes of business ideology are viewed as "verbal and symbolic resolutions of these conflicts." Serving thus as a means of resolving change-induced as well as role-inherent strains, the business ideology performs a major social and social function as an orthodoxy. There is here a conceptual ambiguity which mars this thoroughly valuable work. The authors stipulate that the business creed—a product of the culture, the institutional system, and the institutional role—is logically and historically prior: the book is thus a report on the "ideological characteristics" of the creed. Yet throughout the text "creed" is seen as ideology; creed, it appears from the interchangeable use of the terms, is ideology.

Though the authors insist that "business ideology" is not monolithic and indeed distinguish between "classical" and "managerial" "strands" of "the creed," though they recognize that public utterance and private belief are not necessarily synonymous, and though they point to the immense variability of individual businessman thinking, nonetheless the impression of verbal realism which they seek to avoid is unmistakable as they make successively paired comparisons of these strands in discussions of such categories of economic reference as enterprise, ownership, the executive, labor, and so on. In these discussions, it must be added, they manage to describe, without forensics, the nature of the persisting reality to which the creed (ideology) refers.

Sociologists will probably find the second part of the book, which is devoted to an analysis of the creed, very valuable in its portrayal of the "roots" of the ideology. Their explanation is three-fold: cultural (traditional American themes), institutional (the interlocking relationship of American democracy and private enterprise), and motivational (the role expectations of business executives). In their analysis of the content of the creed (ideology), they make a considerable contribution to the general theory of ideology. The final chapter assesses the stabil-

ity of the creed; they find some hopefulness in the thought that "The strains of the businessman's role do not necessarily enslave him forever to the nineteenth century economist."

The "representative anecdote" which constitutes evidence in this book consists of five sorts of exhibits: (1) pamphlets, leaflets, journals and other materials distributed by business firms and organizations; (2) statements by businessmen and spokesmen at Congressional hearings; (3) business advertisements; (4) articles and editorials in business periodicals and in financial sections of newspapers; and (5) speeches, books and other public utterances by individual businessmen. From a methodological point of view the following statement is surely food for thought! "The universe of business ideology is too vaguely defined for the application of formal sampling concepts. The material we have examined discloses such homogeneity in its major themes that we have no fears that our report suffers from an unrepresentative selection of sources."

PAUL MEADOWS

University of Nebraska

When Labor Votes: A Study of Auto Workers.

By ARTHUR KORNHAUSER, HAROLD L. SHEPPARD and ALBERT J. MAVER. New York: University Books, 1956. 352 pp. \$5.00.

Although the usual voting study isolates union members as one among many of the demographic subgroups whose vote is tallied separately, none has attempted to study the voting behavior of this group in such detail as does the present volume. Here we are given an intimate account of how the Detroit Members of the United Auto Workers voted in the 1952 presidential election. The data are obtained from a survey of the union members taken shortly before the 1952 election. The study was under the sponsorship of the union itself.

Kornhauser and his associates present a detailed analysis of where the support of the Democratic and Republican candidates was recruited. We learn, for example, that the stronger the members' attachment to the union, the more likely they were to vote for Stevenson. In addition, many of the factors—such as ethnicity, income, and so on—which affect the vote of the general population, also affect the vote of union members, although to a lesser degree.

Kornhauser *et al.* also pay considerable attention to the union members view of the union's role in political action. We learn that the more Democratic the individual the more likely he is to approve of his union's attempts to affect the vote behavior of the membership. All told, however, the UAW elicits considerable support

for its political activity, even though the authors could find little direct evidence of impact. Perhaps the most interesting portion of this volume deals with a typology of union members based on their interest in politics and their attitudes towards labor.

Unfortunately a basic fault in the design of this study leaves many of their findings very much up in the air. Because they interviewed only union members, it is never clear whether their findings are characteristic of Detroit UAW members *in particular* or of persons *in general* who are of the same socio-economic status and ethnic background. Consequently they are apparently forced in their analysis of their data to focus on differences *among* union members rather than between union members and other groups in the population at large. Although these intra-union differences are most skillfully analysed, they do not seem to be the main direction in which a study of union members should proceed. For this reason, at many points the reader is forced to remind himself that the persons under study are union members. For many of the analyses attempted it is quite irrelevant that union members are being studied.

Notwithstanding this unfortunate gap in the study, this is a volume of considerable interest to those working in the relatively new field of political sociology. A wealth of data is presented on the voting behavior of a significant group of the voting population. The data are very skillfully analyzed and the findings are well presented.

PETER H. ROSSI

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Union Democracy: The Internal Politics of the International Typographical Union. By SEYMOUR MARTIN LIPSET, MARTIN A. TROW, and JAMES S. COLEMAN. Foreword by CLARK KERR. Glencoe: The Free Press, 1956. xxviii, 455 pp. \$7.50.

This study in political sociology is a scholar's delight. Its methodology is rigorous. It displays creative resourcefulness in the utilization of its documentary, intensive interview, and questionnaire data. The use of historical materials and case studies clothes its propositions with life. The various foundations and funds which contributed the \$17,000 for this study were rewarded with an unusual payoff.

The three authors lead an exciting chase. They indicate how the political processes within the ITU are maintained by both internal and external organizational processes, some of which feed back into the maintenance of the democratic system itself. Not content, they then

search for the determinants of the occupational community itself. Again, instead of merely describing the impact which leadership in a two-party union has upon the functioning of the electoral process, these authors search out how adequate supplies of leadership are maintained. They investigate the legitimacy granted to internal conflict which in turn allows leaders to function in opposition groups.

Lipset, Trow, and Coleman were able to do better in tracking down the processes which maintain the democratic political process in the typographer's union than they were able to locate the factors which originated crucial features of the system. By and large the historical materials available on the development of the union were too poor to make critical determinations.

The three authors were but mildly interested in doing a case study of the ITU for its own sake. By conceiving it as a deviant case, contrasting it with the less democratic American labor unions, they were able to add significantly to the analysis made by Michels' of the "Iron Law of Oligarchy." They find that Michels' law is not iron, but that it is quite possible to specify conditions under which democratic processes continue, despite increases in bureaucratization. Although the 22 propositions formalized at the conclusion of the study will be most useful guide posts to the student of labor organizations, their rich conceptualizations of occupational and political processes were stated in such ways so as to contribute directly to the development of the main body of sociology. Their clarification of the mechanisms of friendship and the operation of status in Homans' model is an important contribution to group behavior. In both the text and especially in their fascinating footnotes, they sketch the implications of their work for such bodies of theory as conformity behavior, social mobility, and ideology.

Perhaps because these workers have done such exemplary work, the critic's level of aspiration rises. Thus, one is disturbed by the consistent lack of any investigation of the interrelationships among the various measures which are used to estimate the magnitude of a single conceptual variable. For example, in handling the notion of "participation," at times one index, "knowledge of political issues," is used to mirror the extent of participation, while at another time another index, "attendance at meetings," will be used. This is important because of the widespread failure in other studies to obtain adequate interrelationships among measures purported to index the same conceptualized process. Although the arguments for the omission of significance tests are well stated in the appendix,

it is difficult to countenance the use of raw percentage differences according to the whims of the authors, as occurred on a few occasions when a percentage difference in one instance is considered important while in another the same difference is considered unimportant (e.g., Figure 25 vs. Figure 35 and corresponding text). Only once was I able to find an error in interpretation of data. In arguing the differential sensitivity of individuals with differing ideologies to social climate, parallel changes in voting behavior were interpreted as indicating divergent (rather than parallel) reactions to social context because of ideology (pp. 357-362).

Although the authors approached their study in terms of refuting or confirming Michels' "Iron Law of Oligarchy," their interpretations of data indicate no doctrinaire approach. Constantly one is given alternative interpretations, which then are tracked down through special analyses in the footnotes or as special sub-analyses within the text itself. Only occasionally did this reviewer find himself able to suggest alternative hypotheses which had not been considered by the authors.

Parts of the analysis of political process in this study are classic vignettes. The use of "ideological sensitivity" as the intensive dimension of the "liberalism-conservatism" continuum proves a powerful device for understanding the quite different ways in which conservative members of the union become politically active, as contrasted with the ways by which more liberal members become activated (pp. 92-102). Perhaps the careful, penetrating analysis of union membership (pp. 261-266) will serve as a corrective to those carelessly written essays about the determinants of participation in union meetings. This section could well serve as a model for the training of graduate students in sociology.

Because this work is fundamentally a case study, its chief value is that of more careful and more extensive specification of the mechanisms involved in the politics of the "mass society." Throughout the book there is an attempt to develop concepts which would handle the behavior of groups as they relate themselves to each other—the large local vs. the small local, the local vs. the international. But this attempt to develop a sociology of groups, as contrasted with their social psychology of individuals in organizations, is quite incomplete, as the authors fully acknowledge. The fruitfulness of the study augurs well for the potential of work at the inter-group level. May the foundations and funds which reaped these results at the social psychological level be wise enough to allocate resources of sufficient magnitude to enable execution of

interorganizational studies needed to understand further the political process of a "mass society."

HAROLD GUETZKOW

Carnegie Institute of Technology

Social Aspects of Wartime Evacuation of American Cities: With Particular Emphasis on Long-Term Housing and Reemployment. Disaster Study Number 4. Committee on Disaster Studies. By FRED C. IKLÉ and HARRY V. KINCAID. Washington, D. C.: National Academy of Sciences—National Research Council (Publication 393), 1956. xii. 100 pp. \$2.00, paper.

This study is a serious and systematic appraisal of the problems involved in the removal of essential and non-essential persons from American cities threatened by atomic attack. The areas considered include: (1) housing the evacuees, (2) interpersonal problems which will arise in billeting communities, (3) re-employment of evacuees in dispersed communities, (4) transportation of evacuees, and (5) problems of political administration. Alternative solutions to problems in each of these areas are systematically appraised, and the most realistic alternative is then considered in detail.

The authors are rather optimistic that the national economy can survive atomic attack. They conclude that, (1) billeting within the limits experienced by western European cities during World War II can absorb the necessary evacuees, (2) problems of family adjustment can be minimized if evacuees make their own billeting arrangements with friends and relatives in non-target areas, (3) moderate expansion of existing productive facilities in non-target areas can meet essential war production demands, (4) rapid and wholesale evacuation of cities with present transportation resources is feasible. To obtain optimal housing with minimum transportation costs, a mathematical technique is proposed.

The conclusions reached are based on a careful examination of data, studies, and experiences in Europe and the United States. If the report has shortcomings, they are: (1) failure to amplify how poorly executed plans may lead to tragic failures, (2) possible underestimation of the range of atomic destruction which may prevent peripheral areas from assuming the added burdens of housing and production, and (3) inadequate consideration of the complex problems of specifying production demands made on surviving industrial areas under alternative national and military policies.

WILLIAM H. FORM

Michigan State University

The Core of the City: A Pilot Study of Changing Land Uses in Central Business Districts. By JOHN RANNELLS. New York: Columbia University Press, 1956. xxix, 237 pp. \$5.50.

During its too-brief history the Institute for Urban Land Use and Housing Studies at Columbia University produced several first-class publications. The book under review is in the same stream as *Urban Traffic: A Function of Land Use*, by R. B. Mitchell and C. Rapkin; it is, in fact, a logical extension of this study, using the same theoretical framework and the same city (Philadelphia) as a case study.

The present study constitutes an "examination of land-based activities and their changing patterns—the accommodations provided for them, their locations with respect to each other, and active relationships among them." Its focus is upon "the underlying systems of activity and their effects, as they develop, on the urban resources that are embodied in land and buildings and services."

There are three main divisions of the material in this study. The first five chapters deal with relationships among activity systems in city centers. Chapter titles indicate the line of approach: Cities Viewed as Concentrations of Activities, Systems and Patterns of Urban Activity, Establishments and Their Linkages, The Physical Setting, and, Land Use in Central Business Districts. In the second part of the book, analytic devices are developed and applied to the Central Business District of Philadelphia. Locational patterns of establishments are described and analyzed by constructing distribution curves, indexes of concentration, and measures of location (e.g. center of gravity, density profiles, and radius of dispersion). The use of large-scale grids, the smoothing of mapped data, and problems that arise in dealing with situations involving irregular map units are discussed briefly. Simple and multiple comparisons among groups of blocks of various business groups are explored. Certain schematic relationships are investigated. The third division of the book introduces a comparison of 1934 and 1949 data, concluding with a chapter on planned arrangement of urban land uses. This last chapter urges the early and thorough investigation of linkages and urban nucleations, leading—finally—to the formulation of a theory of locational arrangement in urban areas.

The compactness of the presentation is relieved somewhat by appendices presenting additional data. A glossary of terms would have been a useful addition; the inclusion of an index would have greatly facilitated use of the study. The expanded Table of Contents is a most welcome feature, indeed. The author proposes a

number of ingenious and illuminating mapping and other analytical techniques, making clear their advantages and limitations. Numerous avenues for further study are suggested throughout. Many of these are quite practicable for the city of Philadelphia but comparative analysis involving very many other cities will necessarily await the collection of requisite data.

Persons undertaking studies of central business districts in particular, and others interested in urban areas in general, will recognize this publication as a genuine contribution to these subjects.

GERALD BREESE

Princeton University

Social Characteristics of Urban and Rural Communities, 1950. A Volume in the Census Monograph Series. By OTIS DUDLEY DUNCAN and ALBERT J. REISS, JR. for the SOCIAL SCIENCE RESEARCH COUNCIL in cooperation with the U. S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS. New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1956. xviii, 421 pp. \$6.50.

It is more than coincidence that the title of this volume is so similar to that of the study which William F. Ogburn published in 1937: this study is a lineal descendent of Ogburn's *Social Characteristics of Cities*. However, new census procedures in the classification of the population by size of place introduced into the 1950 Census coupled with very extensive tabulations in terms of this new classification enable Duncan and Reiss to extend their study beyond a sample of cities to the total U. S. population.

The special report of the 1950 Census of Population, "Characteristics by Size of Place," is the authors' principal source of data which they analyze in terms of the hypotheses and concepts developed in the field of human ecology or social morphology. The fundamental morphological characteristics of communities (size-of-place categories as used here) are size, spatial organization, growth and decline, and functional specialization. The general hypothesis of the study is that "differentiation among communities in one or another of these basic characteristics is associated with variation in other characteristics." In the analysis these four factors are the "determinants of differences" among communities or the independent variables which are studied in relation to such dependent variables as population characteristics, socio-economic level, and the distribution and movement of population in space.

The complete size-of-place classification is a complicated one comprising 17 categories which range from urbanized areas of 3 million or more

down through incorporated villages under 1000 to the "other rural" areas. By ignoring the possible division of urbanized areas into central cities and urban fringes and the populations of villages into nonfarm and farm, the classification actually used in Part I comprises 11 categories.

One of the valuable by-products of the size-of-place analysis is the evidence it provides for an appraisal of the "rural-urban continuum" construct which has been proposed as a substitute for the "rural-urban" dichotomy. On the whole the demographic measures employed show rather surprising regular variation by size of place. There are important exceptions, however, many of which occur in the case of the rural nonfarm group and seem to result from the subdivisions of this group which are used. That there are important differences within both the urban and rural populations is made amply clear, and the lack of solid support for the continuum concept may very well result from the particular size categories here employed. The rural nonfarm population is recognized as a difficult "residual" category and the authors' attempt to differentiate components within it is commendable.

The task of determining demographic and social differences among communities spatially organized is made difficult by the lack of agreement among researchers on the definition of such concepts as "suburb," "rural-urban fringe," and "satellite cities." The Census has neither defined nor delineated these places, with the result that individual researchers have been free—and have been forced—to define these concepts in terms of census categories which are available. In this volume this had led to the employment of two different definitions of "suburbs," under both of which, however, over a dozen cities of over 100,000 are included. It will come perhaps as a shock to the residents of Elizabeth, New Jersey, and Gary, Indiana, to know they are leading the good life so extolled by popular writers on suburbanization. The authors are, I believe, more successful with their definition of the rural-urban fringe, a success, however, which prevents their analysis of this community type as it exists throughout the country. Their study of the Chicago fringe for which they could obtain data is a methodological model which might well be followed by other researchers for a better understanding of this growing and important community type.

The last major section of this volume deals with the functional economic specialization of cities and the economic and socio-demographic correlates of specialization. Specialization is determined by the "export activity" of a community, and is that portion of economic activity over and above what is needed to satisfy local

demand. Employment of this concept enables one to determine specialization in cities of all sizes but does require the use of changing criteria of specialization for sizes of cities. The classifying procedure employed is a further improvement on past efforts in that it gets away from the "either or" situation by allowing a given community to appear in more than one functional class.

There are in this monograph a number of minor points of interpretation which I would dispute in addition to major questioning of some of the functional definitions employed. However, this volume will undoubtedly rank among the best in the Census Monograph Series both for its methodological contributions and its substantive findings.

ROBERT G. BURNIGHT

University of Connecticut

Population Theory and Policy: Selected Readings. Edited by JOSEPH J. SPENGLER and OTIS DUDLEY DUNCAN. Glencoe: The Free Press, 1956. x, 522 pp. \$7.50.

This volume is the first of two—the other being entitled; *Demographic Analysis: Selected Readings*—intended for use in population courses. It "may be used by itself as a relatively self-contained basis for a course in population theory and policy, or in combination with the companion volume—or as a source book of outside readings. . ." (p. ix).

To a reviewer a book of readings (like a textbook) presents a peculiar problem. If it is merely a gathering together of articles intended for supplementary reading in a definite type of course the framework of which is widely known and accepted, it is to be judged primarily by what it adds to the texts (or outlines) available by filling in the gaps in existing aids and by the quality of the selections presented for this purpose.

If, on the other hand, the readings are intended to provide the basis for a course which is "self-contained," as seems to be the primary purpose here, judgment must rest on a different basis. It is no longer primarily a question of how well the selections fill in gaps, or emphasize the more significant points in a course, or even of the quality of the individual selections but rather of how well they are integrated by the editor(s) to give them the unity which every college course should possess as well as being a survey of a particular field of knowledge. This is especially needed in theoretical courses such as this book is intended to serve. There is also the further consideration regarding the level of academic attainment of the students for whom the readings are intended.

Judged from these standpoints it seems to the reviewer that this book has several shortcomings. (1) The connecting material added by the editors is entirely too scanty and too indefinite. The introductory statements make no pretense of binding the nine chapters into a coherent whole so that a pattern for a course in population theory and policy clearly emerges. There are no statements indicating the significance of the 39 selections in the course as an entity or to one another even within their own chapters. It seems to the reviewer that it is only reasonable to expect this in the light of the editors' statement that this may provide a "self-contained" basis for a theoretical course. (2) The type of student who would profit from the use of these readings is not clearly specified. If it is intended chiefly for undergraduates who have had no previous work in population many of the selections, excellent as they are, will have little meaning to them. Many, perhaps most, of the articles were originally aimed at better prepared students. (3) If the readings are intended primarily for graduates who already have considerable familiarity with population materials the case is quite different. For them the chief additional need is not for simpler readings but for additional annotated references to articles and books which bear on different points of theory and discuss the points best represented here from different angles.

WARREN S. THOMPSON

Miami University

Cowtown—Metropolis: Case Study of a City's Growth and Structure. By ROBERT H. TALBERT. Foreword by AUSTIN L. PORTERFIELD. Fort Worth: Leo Potishman Foundation, Texas Christian University, 1956. xvii, 274 pp. \$4.50.

Professor Talbert has prepared in convenient form a fact-book on Fort Worth and its development. His principal theoretical concern is with the significant role of local leadership in developing a metropolis out of a cowtown indifferently advantaged by nature over other pioneer settlements in north Texas. It is his view that urban sociologists in the Park-Burgess tradition have over-emphasized the impersonal operation of forces which determine urban structure.

His ten chapters begin with two which interpret Fort Worth growth from an 1849 military outpost to a 1955 city of 350,000 population in terms of crucial economic changes, often, as in the case of the coming of the railroads and the packing plants, sponsored and subsidized by aggressive community leadership. A chapter care-

fully summarizing population composition and trends follows. Chapter four provides detailed census-tract analysis of 1950 demographic, housing, and pathology data. Five chapters follow which emphasize standard statistical and historical data on (1) economy, (2) housing, (3) health and welfare facilities, (4) municipal government, and (5) education. In a final chapter, Professor Talbert pleads for a leadership which will satisfy for Fort Worth the following basic community needs: "(1) A stable economy. (2) An educational system which successfully transmits the necessary skills and understanding for mature living in our society. (3) A program of health and sanitation which successfully utilizes the current knowledge of medicine and science. (4) Stable family life. (5) Effective religious experiences. (6) A program of recreation which is both re-creative and conducive to the development of mature adults. (7) A physical structure which maintains maximum standards for safety, convenience, and the aesthetic needs of the people. (8) A program for housing the population which will recognize the needs of people." (p. 263)

Students of urban social structure will be disappointed to find, however, that the book's avowed focus on leadership has not been implemented by analysis of leadership and power structure as it operates in relation to crucial issues and value conflicts now confronting Fort Worth. There is, for example, in all the discussion of economy and economic development, no reference to organized labor and changing power patterns in industrial relations. There is in the chapter on education no mention of the desegregation decision of the Supreme Court, nor any analysis of public opinion or leadership alignments in relation either to compliance with, or patterned evasion of, the law of the land. Brief reference is made to the interesting Gruen Plan which would build a freeway around the Fort Worth central business district, eliminate all surface vehicular traffic inside the freeway loop, and provide service to loop establishments through tunnels. But no discussion is provided of the sociological dimensions of this proposal—the pressures supporting and those opposing it, factors in its likely adoption or rejection, and the probable repercussions of its actual building. Only in a final page and a half is reference made to the fact that Fort Worth is really half a metropolis, with Dallas the other half. To deal with the trade area of Fort Worth apart from that of Dallas, as Professor Talbert does, seems unrealistic. It would have made much more sense, in this reviewer's view, to have written a Dallas-Fort Worth story, in which a central theme might have been the development of a

single metropolis *in spite of* the leadership in both cities.

DAVID B. CARPENTER

Washington University, St. Louis

Family Medical Costs and Voluntary Health Insurance: A Nationwide Survey. By ODIN W. ANDERSON and JACOB J. FELDMAN. New York: The Blakiston Division, McGraw-Hill Book Company, 1956. xix, 251 pp. \$6.50.

Chronic Illness in the United States. Volume II: Care of the Long-Term Patient. By THE COMMISSION ON CHRONIC ILLNESS. Cambridge: Harvard University Press for The Commonwealth Fund, 1956. xv, 606 pp. \$8.50.

Organized Home Medical Care in New York City. A Study of Nineteen Programs. By THE HOSPITAL COUNCIL OF GREATER NEW YORK. Cambridge: Harvard University Press for The Commonwealth Fund, 1956. xvi, 538 pp. \$8.00.

Large portions of these three books are of only peripheral interest to the sociologist. However, since aspects of each of them merit careful consideration by at least some sociologists, this review will attempt to delineate their sociological significance. Space will not permit detailed consideration of their substantive content.

Dr. Anderson describes his study as "primarily an economic study of the distribution of the costs of personal health services and the effect of voluntary health insurance in spreading the costs of such services" (p. 88). Because of this limitation, the specific findings from this 1953 study of a national "area probability" type sample of American families will be of greatest interest to medical economists.

However, one finding of particular significance to this reviewer was that: "approximately 77 per cent of those families which currently have some [health] insurance originally obtained one of their present policies through a group" (p. 18), "group" usually meaning the breadwinner's place of work or union. This finding reflects an increasing reliance by Americans upon their jobs as sources of direct benefits other than income alone. With an increase in the number and variety of desires and needs fulfilled by the American's job, the sociologist can anticipate further centrality of "the job" as the focus of the individual's sense of identity and of his orientation regarding his total society.

The detailed section on methodology by Mr. Feldman represents an exemplary documentation of the assumptions and procedures employed in the study as well as a critical evaluation of the data themselves.

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York City and Care of the Long-Term Patient deal intensively with related medical problems which deserve the humane attention of all Americans as well as the professional attention of sociologists.

Attitudes of patients, and their families, as well as the attitudes of medical personnel and of the general public are discussed in both books in relation to their effects on the economic and emotional impact of long-term illness. Students of The Family will be especially interested in many sections of both books. For example, one theme in *Care of the Long-Term Patient* is apparent in the following: "Families are drained emotionally and economically [by chronic disease], and associated with all chronic illness are important dislocations in relationships between the patient and his family and with society" (p. 11). While chronic illness and home care is not exclusively confined to older people, gerontologists will also find in these books many analyses directly relevant to their investigations as will social psychologists and those interested in social stratification.

Both books, and especially that by the Commission on Chronic Illness, contain a number of explicit and implicit suggestions for research by sociologists of various professional persuasions. The gauntlet is thrown down to social scientists in general by the Commission on Chronic Illness as follows: "Fact finding in the medical and social sciences must have high priority in claims on research funds and research personnel. Only through research can we find clues to the distribution and severity of chronic disabilities of various types, to their obscure causes, and to the factors that impede or accelerate their progression" (p. 22).

It seems incumbent upon sociologists to accept a major responsibility in future public health efforts. In accepting their responsibilities they must be prepared to extrapolate from general sociological theory to the particular health problem at hand; and, at least equally important, they must be willing to perform yeoman service in the mundane but vital task of "fact finding."

NORMAN A. HILMAR

*Office of The Surgeon General
Department of the Army*

Women's Two Roles: Home and Work. By ALVA MYRDAL and VIOLA KLEIN. New York: The Humanities Press, 1956. xiii, 208 pp. \$5.00.

This is a well-intentioned but naive effort to solve the much-discussed "dilemma" of modern women. The authors' stated motivation is to survey social reforms needed before women can

reconcile family and professional life. The discussion refers to British, French, Swedish and American women. Pertinent statistics are presented with commendable impartiality, but are glossed over in suggested "reforms." At least in regard to American women, the proposals seem unrealistic.

The authors argue that with small families and homes denuded of many traditional functions, housewives are under-employed, economically unproductive and mentally unstimulated. Therefore, they suggest that housewives be forced by public opinion to have full-time outside employment except during their children's early years. Their household duties are to be performed commercially. The authors imply that each working wife should have a half-time servant. As they suggest, this does "sound like a plan for women to take in each other's washing." Housework is also to be reduced for many families by communal living arrangements reminiscent of the ill-fated experiments launched in Russia after the revolution.

Actually all available evidence, including that quoted by the authors, indicates that American housewives are neither unproductive nor under-employed. The authors' statistics show that the average urban American housewife spends approximately 80 hours a week on household duties. If our grandmothers indeed worked more hours, one is tempted to inquire how many hours their weeks contained. Careful studies have also indicated that through her housework, shopping and planning, the average American housewife adds as much to her family's real income as she could earn by outside employment. The employed wife must surrender most of her earnings for taxes, business expenses and for frequently inadequate commercial performance of her household duties.

Insufficient recognition is given to the fact that while the American home has lost some functions, it has gained others and standards have been generally raised. Few women of previous generations expected to "live graciously" without servants, although they frequently had extra help from nearby relatives and older children. Now housewives in a large and increasing section of the population are expected to be interior decorators, hostesses, child psychologists, dieticians and attractive, alert companions. These roles as well as others would necessarily suffer if each housewife sought outside employment.

A fact which the authors admit but generally ignore is that conflict between professional and homemaker roles exists largely in the lives of a relatively small number of well-educated, intelligent and highly motivated women. American

studies show that even among college graduates a large majority of wives have no desire for outside work. Charges of unproductiveness and under-employment do a disservice to housewives and to husbands and unmarried women. Such discussions may give husbands and unmarried women highly unrealistic views of the role and functions of the housewife. And the busy housewife may be distressed by a lack of appreciation and by doubts about her own worth.

Despite some contradictions and shortcomings, the book offers statistics and a provocative viewpoint of interest to sociologists concerned with the problems of the educated woman.

EVELYN ELLIS ELMER

Kansas City, Missouri

Five Hundred over Sixty: A Community Survey on Aging. By BERNARD KUTNER, DAVID FANSHEL, ALICE M. TOGO, and THOMAS S. LANGNER. New York: Russell Sage Foundation, 1956. 345 pp. \$4.00.

This study, sponsored by the New York City Department of Health, Cornell University, and Russell Sage Foundation, surveys adjustment to aging in a sample of New Yorkers and appraises health and welfare services for the aged in New York City.

Five hundred respondents, sixty and over, were chosen by stratified area sampling from the Kips Bay-Yorkville Health District. Seventy per cent of the sample were foreign born and another 17 per cent had foreign born fathers. Data were obtained by a one to one-and-a-half hour interview covering from 160 to 230 items. A number of scales were constructed, including measures of morale, conservatism, and disposition to use health services.

Cross-tabulations yielded findings such as: poor health is associated with low morale among low socio-economic status respondents but not among high status respondents; retirement is particularly disliked by those who are socially isolated and who regard themselves as worse off than contemporaries; having a job is more closely associated with high morale than is keeping busy with recreational activities; social isolation, or infrequent contact with family and friends, is greater in the low status group; non-isolation tends to be associated with worry about one's health; those in good health report having very few physical checkups by a physician; ethnic groups differ in amount of worry over health and in amount of use of health services; a substantial number of respondents prefer special community services for the aged, but another substantial number prefer community services without this age specialization.

In discussing services for the aged in New York City, the authors emphasize the heterogeneity of older people's needs, wishes, and capabilities disclosed by their survey. For this reason, they recommend a variety of additions to or modifications of community services for use by different members of the aged population. As a result of this study, an Adult Counselling Center was opened in the Kips Bay-Yorkville Health Center.

The authors use the concept of role loss or an equivalent idea at various points in interpreting the data of the survey, but their interpretations are only sketchily pulled together. A more explicit and systematic statement of an analytic model to subsume the data would have added evidence of the data's validity. It is to be hoped that some future publication will set forth such a model. At a number of points the authors infer sequential patterns of change with aging from data on subcategories of increasing age of respondents; the correctness of such inference remains to be demonstrated.

This study makes a substantial addition to our knowledge of aging. Those who wish to use the study findings in community planning will no doubt be aided by the authors' detailed discussion of programs for the aged.

DORRIAN APPLE

Boston University

Ancestors and Immigrants: A Changing New England Tradition. By BARBARA MILLER SOLOMON. Cambridge: Harvard University Press, 1956. xii, 276 pp. \$4.75.

This book is an intellectual and social history of the development of an anti-immigration ideology among the New England Brahmin leaders—mainly in the last half of the nineteenth century. This ideology is depicted as part of the social movement which culminated in the restrictive immigration legislation of 1924.

The background of the movement in New England was a set of social values set deeply into the Brahmin intellectual traditions of a predominantly rural society. These values were challenged by urbanization, industrialization, and the accompanying mass migratory movements. Mrs. Solomon describes the way in which this challenge first created conflict and uneasiness in the minds of some leading New England figures. Later this diffuse uneasiness became focused in a positive program for immigration restriction. This program was rationalized in terms of the social and biological science of the day. The movement was intended to halt a presumed ethnic deterioration. As described in this study, the movement finally enlisted the sym-

pathy and active support of large numbers of New England academic and other intellectuals. Only a distinguished "minority with faith" continued to support the older conception of free immigration as linked to American democratic ideals.

Vignettes of the ideas of leading New England figures are the principal means of presenting the historical evidence. Beginning with the intellectual conflicts of such figures as James Russell Lowell and Henry Adams, the movement finally developed a definite anti-immigration program with the support of such men as Robert A. Woods and Henry Cabot Lodge. The intellectual minority dissenting from the anti-immigration program is represented by such men as Josiah Royce and William James.

The kinds of issues and data dealt with in this history are in the field of interest of many sociologists. Unfortunately, few sociologists are trained to deal with the historical sources in which the richest data are found for many of their research problems. For example, in this case, the sociological problem is the process by which social norms change under the impact of population invasion. While Mrs. Solomon accomplishes her purpose as historian very well, explicit generalizations about the types of social process involved demands the attention of sociologists.

Like many social historians, the author is skillful in presenting the main features of a mass of data in a lucid and interesting manner. One wonders if the felicitous style of such historical writing is not facilitated by a lesser concern than the sociologist has for specifying either the systematic sampling basis of generalizations or the degree to which generalizations are true. Mrs. Solomon makes clear that she has consulted carefully the primary and secondary sources, but the data are necessarily presented illustratively rather than systematically. A sociologist concerned with sampling problems might ask: (1) Do the available documents or those consulted represent an adequate sample of the New England intellectuals of the period? (2) On the basis of such an adequate sample, what proportion of the intellectuals held various positions on the issue in question? These questions are not intended in any way as a criticism of findings of this study. They are intended to call attention to the different methodology with which a sociologist might approach such problems. The work of the sociologist would certainly be less readable, and, perhaps, no more informative.

RONALD FREEDMAN

University of Michigan

Understanding Minority Groups. Edited by JOSEPH B. GITTLER. New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1956. xiii, 139 pp. \$3.25.

This is a compilation of the papers presented at an institute on American minority groups sponsored by the University of Rochester during the last three months of 1955. It is difficult to conceive of a more distinguished panel of experts on intergroup relations than the ten contributors. Four are sociologists (Ira de A. Reid, Dorothy Swaine Thomas, Clarence Senior and Joseph B. Gittler), two are historians (Oscar Handlin and Cornelis de Kiewet), and the others represent anthropology (John Collier), law (Theodore Haas), philosophy (Wayne H. R. Leys) and journalism (John La Farge). Their essays deal with six of our most conspicuous minorities—Catholics, Indians, Jews, Negroes, Japanese and Puerto Ricans. Rounding out the volume are introductory and concluding papers on general aspects of minority groups and their problems.

The focus of the institute was not the "how" of reducing prejudice and discrimination. Instead, the primary effort was to delineate the minorities selected for discussion and to describe some of the problems arising from their minority group status. In view of the importance and timeliness of the problem and the unquestioned merit of the contributors, it is unfortunate that such broad topics had to be assigned and dealt with summarily. The essays for the most part merely outline the salient historical and sociological landmarks of the minority groups in question. As a result, there is very little that is new here. The most original piece is Leys' essay on "The Philosophical and Ethical Aspects of Group Relations." Professor Leys stresses that the ideal of "good" group relations requires more than the three negations: avoid misunderstandings, avoid violence, and avoid prejudice. Furthermore, he makes a thought-provoking attempt to show the "false" clarity of popular intergroup slogans by subjecting them to a searching, ethical analysis.

Gittler's concluding essay on "Understanding Minority Groups" is, as one should expect, an appraisal of what was offered by his contributing panel. But there is no good reason for withholding until the end of the book such preliminary matters as the statistical versus sociological meanings of minority, definitions of prejudice and discrimination, and the social psychology of minority-group identification.

MILTON L. BARRON

The City College of New York

Vivo Annual of Jewish Social Science. Volume X. New York: Vivo Institute for Jewish Research, 1955. 320 pp. No price indicated.

The transfer of the Vivo Institute for Jewish Research from Vilna in Poland, where it was founded in 1925, to New York in 1939, following the outbreak of World War II and the physical destruction of the majority of the Jewish population in Eastern Europe by the Germans, have naturally resulted in a trend towards greater and deeper interest on the part of the Vivo Institute in the structure and development of Jewish life in its various aspects on the American continent, and particularly in the United States. To its original objective of studying all aspects of Jewish life, past and present, using the methods and techniques of modern social science, has been added the objective of interpreting Jewish life not only to the non-Jewish academic world, but also to the increasing number of Jews on the American continent who know little of the cultural background and folkways which moulded the lives of their parents and grandparents in the lands which they left to make their homes in America.

Of the ten studies in this tenth volume of the *Vivo Annual of Jewish Social Science* published in English, four deal with American and six with European topics. Aaron Antonovsky's study of "Aspects of New Haven Jewry" presents socio-economic data on a middle-sized Jewish community of about 22,000 Jews, analyzes the attitudes shown by second generation Jews in that community to Jewishness, and to relations between Jews and non-Jews, and seeks to find out whether Jewish education, attitude of father to religious observance, age and occupation have been causal factors in the development of such attitudes.

Joshua Fishman's investigation of "patterns of American self-identification among children of a minority group" explores certain hypotheses by means of individual interviews with Jewish children, a procedure which was subsequently abandoned in favor of group interviews with children attending various types of Jewish schools.

Benjamin Malzberg's study of "Mental Diseases among Jews in New York State" is of particular interest, since the statistics of mental hospital admissions in that state are complete and uniform for more than 30 years, and enable us to get some idea of the relative prevalence of some types of mental disease among Jews and non-Jews.

The remaining six papers included in the volume deal with such subjects, among others, as the institutional aspects of Jewish life in Warsaw in the 19th century, the Anglicization of

Eastern European Jewish immigrants in England from 1870 to 1897, and Sephardic, Ashkenazic and Avignonese Jews in France from the 16th to the 20th centuries.

All the studies maintain the high standard set in previous volumes, and give those unacquainted with the Yiddish language in which the majority were originally published an interesting and valuable insight into some aspects of the sociology of the Jewish population in the United States and Europe.

LOUIS ROSENBERG

Canadian Jewish Congress

The Negro Family in British Guiana: Family Structure and Social Status in the Villages. By RAYMOND T. SMITH. With a foreword by MEYER FORTES. New York: The Humanities Press, 1956. xvi, 282 pp. \$6.00.

Dr. Smith has set a twofold task for himself: to describe the British Guiana lower-class Negro family and to interpret the facts in light of "general sociological theory." By the latter he means an analysis of systems, the most inclusive of which is the whole Guianese society. The data were collected in three communities that varied in population (685 to 1727), in having different degrees of economic prosperity, and in being located at different distances from the urban center of Georgetown.

Part I, consisting of one chapter, is devoted to a brief comparative overview of the histories, ecologies, and basic economies of the three communities. In the six chapters constituting Part II, Dr. Smith carries out a masterful structural analysis of the family, focusing first on the household, then on broader considerations of kinship, marriage, and the community. In Chapter VI he states the norms of household structure and grouping, along with the principle of *matri-filiation*, meaning the centrality and stability of the mother-child relationship in contrast with the weak and marginal aspect of the father-child and husband-wife relationships. This is not to be confused with matrilineal descent.

In Part III Dr. Smith places the *matri-focal* household group or family in the context of British Guiana society by articulating it with the color-class status system. In so doing, the concept of lower-class matrifiliation is explained as a specific structural response to two cultural factors: a status system wherein the lower segment is characterized by lack of mobility, imposed by color; and the relative economic independence of women, particularly as their sons take over supportive responsibilities. This position brings the work in direct conflict with the

the Herskovits African-retention hypothesis insofar as this is used to explain the importance of women in West Indian family organization. To further support his anti-African position, Dr. Smith erects his explanation to a general hypothesis: that there will be positive ". . . correlation between low social status in a stratified society and a type of family system in which men seem to lack importance as authoritarian figures in domestic relations." (p. 253). This he tests cross-culturally, using Moche, Tepoztlán, and a Scottish mining community, with some negative evidence gleaned from the patrilineal Tallensi. The Scottish example is specifically included to show that low status alone, without race or color, constitutes a sufficient independent variable. There will certainly be differences of opinion as to whether or not the hypothesis stands tested and supported, but the important fact remains it is testable. A rather dramatic situation that comes to mind and which certainly supports the hypothesis is the Aginskys' description of Pomo culture change. (*Social Forces*, 26 (October 1947); pp. 84-87)

Dr. Smith's book is not only an excellent analysis of the British Guiana lower-class family, it is by far the finest structural analysis of New World Negro family and kinship yet to appear. By posing a general hypothesis regarding the relationship between the importance of female family rôles and the social status system, his work becomes of theoretical interest as well.

WILLIAM DAVENPORT

Yale University

Social Relations and Morale in Small Groups.

By ERIC F. GARDNER and GEORGE G. THOMPSON. New York: Appleton-Century-Crofts, Inc., 1956. ix, 312 pp. \$6.00.

The Study of Groups. By JOSEPHINE KLEIN.

New York: Humanities Press, 1956. ix, 200 pp. \$5.00.

Gardner and Thompson introduce a new instrument for measuring social relations in small groups. Klein presents a summary of the principles of small groups, based on the conclusions of research in the field.

Gardner and Thompson's social relations instrument is intended as an improvement over traditional sociometric techniques by providing: a rating for every member of the group, comparability of data between groups, and an equal interval scale. Each group member, using the assumption of a normal distribution, constructs a scale based on an outside reference population on which he then places each of his fellow group members, according to the member's potentiality for satisfying a particular need. A different

scale is constructed for each of four needs: affiliation, playmirth, succorance, and achievement-recognition. In the study of nine fraternities presented by the authors the primary reference population used was, "all the men you have ever known." Various indices were constructed based on ratings made, ratings received, variances of ratings made and received, etc. It was found that fraternities high in need-satisfaction potential, as measured by these indices, also tended to be high on various, independent measures of morale and group achievement.

This instrument promises to be a useful addition to the study of small groups. A serious limitation, however, is the time required for administration. In this study thirty to forty-five minutes were spent interviewing each group member. This would be a handicap in the many instances when members of ongoing groups are reluctant to give the investigator more than a few minutes of their time. It would make repeated studies on the same group difficult. However, Gardner and Thompson are investigating the possibility of administering the instrument simultaneously to all group members. The time required for administration might further be reduced by combining two or more of the four needs. The authors' very limited investigation of the independence of these needs indicates that there is considerable overlap among them.

A serious shortcoming of this work is the authors' tendency to pay attention to the results of their statistical tests only when these support their hypotheses, thus severely limiting the value of their detailed statistical analyses.

Klein, in summarizing the work that has been done in small groups, proceeds from a very simple to a more complex group situation, gradually taking into account a greater number of variables. Each chapter (with the unexplained exceptions of eight, nine, and twelve) is organized in terms of a series of assumptions, each defining a limiting condition. The analytical effects of each limiting condition are discussed in terms of data from relevant studies.

The first half of this small book does an interesting job of summarizing and integrating a great deal of work in the field of small groups, including a large number of different experiments. The second half, however, is primarily a repetition of the work of first Homans and then Bales, with some variations being made in Bales's schema. In the appendix the author presents her own study of three small groups.

Possibly because she is attempting to present a unified picture of the field of small groups. Klein tends to ignore differences between the authors she cites. For example, in the relationship between leadership and popularity her own

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data disagree with the findings of Bales. However, she proceeds with her discussion as if the data had supported Bales's hypothesis.

Both books, despite their shortcomings, have a contribution to make to the development of the field of small group analysis.

GEORGE A. THEODORSON

Pennsylvania State University

Anthropology in Administration. By H. G. BARNETT. Evanston: Row, Peterson and Company, 1956. viii, 196 pp. \$5.00.

The incorporation of science and scientists into American bureaucracies has stimulated a new literature over the past decade. While essays on the relationship between policy making and scientific investigation is an old topic, their character has changed for at least three reasons. First, the social role of the scientist in American life has taken on new dimensions. In addition to the more traditional role of the professional intellectual who acts as independent critic or appraiser (represented earlier by such figures as Ross, Veblen, Sumner and currently by Fromm, Mills, W. H. Whyte), there has emerged the technical-expert who serves as special consultant or fact finder for decision makers within large-scale organizations.

Second, the pattern of administration in American bureaucracies is evolving into what Max Weber referred to as legal-rational types of structures. In the context of this social environment, the skills of the social scientist, along with the specialists in finance, public relations, and personnel have become an essential part of the rational half of the term and hence there is a growing demand for these sorts of experts. Third, a nation transformed into a world-wide power and thereby engaged in international enterprises which intersect a variety of cultures, of necessity is compelled to become more knowledgeable about foreign societies; as a consequence some form of research has been increasingly recognized as a means for assuring more effective programs.

The new writings reflect these trends in their concern over such questions as the social arrangements which maximize the effective use of science by administrators, the nature of the scientists' tasks, the function of research in the decision process, the values and ethics of the scientist, and criteria for the selection of worthwhile research problems.

The book under review is a substantial contribution to recent literature on these themes. It represents the experiences and observations of a scholar who served in the capacity of staff anthropologist between 1951 and 1953 for the

United States Trust Territory of the Pacific Islands. Viewed sociologically, the general case represents an instance in which one society is dominant and others are subordinate; placed in historical perspective, the case study focuses primarily on the post-war years during which a civil administration has replaced a military government.

The author carefully examines the role and work of the anthropologist in this particular case within a broad framework. Those who desire a perceptive analysis of the recorded experiences of the use of social science by a wide range of administering powers will find the initial two chapters a valuable resource. Briefer references, of necessity, are made to the place of social science in cross-cultural relations between coordinate societies. A further study of this type would be most instructive for comparative purposes.

I was especially impressed by the author's thoughtful appraisal of the efforts to design an effective role for anthropologists in the Trust Territory administration. This subject, which comprises the central theme of subsequent chapters, is presented in a manner which enables the reader unfamiliar with the enterprise to gain considerable insight. He offers no pat answers to what obviously are highly complex and often moot issues and instead endeavors to assess objectively the strengths and weaknesses of various schemes by reference to a series of specific problems.

This book plus other similar studies offer the promise of building a new fund of knowledge on the place of social science in the policy making of societies.

JOHN USEEM

Michigan State University

Prospero and Caliban: The Psychology of Colonization. By O. MANNONI. Translated by PAMELA POWERSLAND. With a foreword by PHILIP MASON. New York: Frederick A. Praeger, 1956. 218 pp. \$4.25.

American-Asian Tensions. Edited by ROBERT STRAUSZ-HUPÉ, ALVIN J. COTTRELL, and JAMES E. DOUGHERTY. The Foreign Policy Research Institute (University of Pennsylvania) Series Number 3. New York: Frederick A. Praeger, 1956. xiv, 239 pp. \$3.75.

Although of very different character and focused on widely separated territories, our two books fall squarely into the general problem area of relations between Western and non-Western peoples. Considerations of space compel me to resist the temptation to include Chester Bowles' *Africa's Challenge to America* as a bridge be-

tween the two works, but I trust that this mere mention of a title will serve as a spur to the reader because Mr. Bowles' study is important and relevant. M. Mannoni's book, like Mr. Bowles', is an individual and personal venture whereas *American-Asian Tensions* is a team study conducted under the auspices of the Foreign Policy Research Institute of the University of Pennsylvania.

M. Mannoni's study, written in 1948 and published in French in 1950 under the title *Psychologie de la Colonisation*, is set in Madagascar and is largely based on an analysis of the psychological background to the bloody Malagasy uprisings of 1947. It will be recalled that these uprisings followed the introduction of a number of administrative changes and that they occurred at a time when Europeanized and partly-Europeanized Malagasies had recently returned to the island after World War II.

The main hypothesis of *Prospero and Caliban* is that the well-intentioned post-war reforms of the French Colonial Administration were badly timed and badly presented and were of such a nature as to evoke a strong sense of "abandonment" or "betrayal" among Malagasies, who had long accepted a relationship of "dependence" on French leadership and control and who were suddenly brought to the "brink of an abyss of 'inferiority'." This feeling is seen to lie at the root of the violence, which was fomented and led by Europeanized Malagasies "whose assimilation had been incomplete . . . for they are the people most likely to develop a real hatred of the Europeans." The central theme and argument rests on M. Mannoni's assessment of the radically different cultural backgrounds and personality structures of the Malagasies and the immigrant Europeans, differences which led to the acceptance of the relationship of "dependence" by both, though the Europeans failed lamentably to appreciate the nature and degree of the social or socio-psychological responsibility which they had assumed.

The author's disarming prefatory note to the 1956 English translation makes it difficult for a reviewer to appraise the work because M. Mannoni declares that he "rashly employed certain theoretical concepts which needed more careful handling" and that he is "now disturbed by the obvious weaknesses of the book in this respect." Nevertheless one may justly point to weaknesses and deficiencies in the comparative references, especially on Africa, on which there is a good deal of valuable and relevant material, and it is legitimate also to express the wish that M. Mannoni had placed his study more firmly within the context of the substantial body of inter-racial and cross-cultural research that is available. For example, the proposals to reform

local government, chiefly by reviving traditional institutions, could be most usefully examined in the light of British and Dutch colonial experiments while works such as Robert Redfield's developmental studies of Chan Kom, and Margaret Mead's recent examination of change among the Manus, could also be used with great benefit. Nevertheless M. Mannoni's book is characterised by a number of important insights into the problems of human relations in colonial and colonial-type societies and it contains a number of healthily "self-critical" and refreshing questionings of French policy and practice at the time when he was in Madagascar.

Critical comparison provides the basis of the Pennsylvania team-study on *American-Asian Tensions*, a carefully documented examination of military, political and economic relations between the United States and India, Indonesia, Japan, the Philippines, and Egypt. The writers have been concerned to bring out the distinctive character of each of the countries with which they deal and they have critically dissected blanket terms like "Asian" and slogans like "colonialism" and "Imperialism." A helpful operational definition of *tension* is followed by a reminder that the study is focused on problems and is, therefore, not intended to bring out all aspects of international relations, especially the more constructive or harmonious features of United States contact with the selected peoples. The interpretive comments and the statements of conclusions are refreshingly frank and should prove valuable as aids to the removal of misunderstandings.

One cannot read a book like this without being made constantly aware of the principal difficulty which confronts all authors of works on contemporary problems, that of being up to date, but the writers of *American-Asian Tensions* have been particularly unfortunate in this respect. Thus, while it was no doubt reasonable, early in 1956, to assume a possible "easing of Arab-Israeli tensions" and to acknowledge Britain's "key position in the Middle East," and possibly even reasonable to talk of the Suez Canal becoming "less vital in international politics," the pressure of international events has brought about marked changes. And when the authors predicted "that the fissure which has opened between the two countries (India and the U. S. A.) is likely to widen into a chasm," they could not have foreseen the Eisenhower-Nehru meetings, even though it is as yet premature to speculate on the outcome of these apparently frank and friendly talks.

But perhaps the best tribute to *American-Asian Tensions* is that one would like to see its authors take into account the new developments

in the Middle East and India, and in Sumatra and the Japanese islands, and to offer us further stimulating and challenging conclusions. But whatever we may think of predictive assumptions about situations which the authors themselves acknowledge to be "fraught with imponderables," we would surely agree that their assemblage of important official statements and major editorial comments is of real and lasting value.

KENNETH KIRKWOOD

St. Antony's College, Oxford

Sinhalese Social Organization: The Kandyan Period. By RALPH PIERIS. Colombo: The Ceylon University Press Board, 1956. xiv, 311 pp. Rs. 10.00.

Some Aspects of Traditional Sinhalese Culture: A Symposium. Edited by RALPH PIERIS. Peradeniya: Ceylon University Conference on Traditional Cultures, 1956. 113 pp. Rs. 4/50 from Lake House Bookshop, P. O. Box 244, Lake House, Colombo, Ceylon.

Sinhalese Social Organization: The Kandyan Period depicts the historic, formal social structure of the interior region of Ceylon prior to serious European influence. *Traditional Sinhalese Culture* is a series of lectures, mainly by Sinhalese scholars, given at the UNESCO sponsored "Ceylon University Conference on Traditional Cultures" in 1956. Whereas the first work is a factual historic reconstruction, the second is of sociological interest chiefly as an expression of incipient nationalism.

Dr. Pieris has treated Kandyan society under six main divisions: government, village organization, revenue and service, the legal system, social stratification and kinship and marriage. In addition he appends a number of extracts from early accounts, mainly those of British observers, and a twenty-nine page detail on the social structure of a selected province of the Kandyan Kingdom. While the work brings together much material and bespeaks considerable archival labor, the writer has generally been satisfied with presenting formal detail with less attention to the contextual background within which events, rules, and offices must have had life and meaning. The outstanding chapters have to do with kinship and marriage, especially polyandry. For much of the remainder, however, the handling of Part I (government) may be illustrative. Of 28 pages devoted to the government of the Kandyan Kingdom, 4 relate to kinship and charisma while most of the remainder is annotated lists of official functionaries. (Bathroom attendants are given attention equal to the grand treasurer.) Over a third of the material is in the form of appendices. Two

of these are lists of inferior offices reprinted from accounts of 19th century British observers, and the third is a description of a coronation. Such a dessicated approach to social structure will be more interesting to Sinhalese antiquarians than to sociologists, who may, without prior knowledge of Sinhalese society, see many trees but few forests. Necessitated by this type of approach, between six and seven hundred Sinhalese terms (not counting place names) are used through the book. A glossarial index is provided.

A considerable part of this work parallels that of F. A. Hayley in his *Laws and Customs of the Sinhalese . . . Kandyan Law*, published in 1923. Pieris has painstakingly retraced Hayley's steps in many sources and contexts, but Hayley, the English jurist, was able to portray the organized life of a people more coherently than Pieris, the Sinhalese sociologist.

Traditional Sinhalese Culture, introduced by Dr. Pieris, contains lectures by eight Sinhalese exponents of "traditional culture" (*viz.* dancing, painting, puppetry, weaving, etc.) and by two western social scientists, one of them an American visitor, Christopher Sower. Excepting the two outlanders, most of the authors suggest that the state of Sinhalese arts is deplorable and that strong efforts must be made to revivify them. The villains are colonial rule and industrialization. N. D. Wijesekera even observes that "we need to save the world from the melancholy effects of industrialization." Generally it is recognized that traditional arts were linked with the feudal-caste-magical, village order. There is little realism, however, in assessing the problems of folk art preservation during a time in which internal and external forces virtually dictate increasing secularization, if Ceylon is to retain her hold on relative prosperity. At several points, this symposium has the ring of an epitaph to a small but great civilization. However, at the same time, it demonstrates how the arts can provide a rallying point for nationalism. Distortions and exhortations are to be expected in such circumstances and while both are present in this volume, they are of less significance than the evidence of new national pride among educated Sinhalese. The positive value of this is qualified by the fact that the Sinhalese are only one of the nationality groups, albeit the dominant one, in Ceylon. Unhappily it would appear that both UNESCO and Ceylon University are subsidizing *Sinhalese* rather than *Ceylonese* nationalism. At no point in the symposium is there a hint of developing traditional cultural elements in which Tamil, Moor, Burgher and Sinhalese might be united. To the contrary, one writer grossly distorts the Indian origins of Sinhalese culture.

There is a tragic significance in the depth of concern these scholarly men demonstrate for preserving folk art at a time when Ceylon faces her greatest challenge in social experimentation and potential world leadership in social and economic action among the new Asian nations. The resolution of contemporary problems along paths consistent with traditional cultural values is the crucial problem in the preservation of "traditional culture." This issue is not likely to be broached when "culture" is defined in terms of folk art, and "preservation" is conceived as the retention of static forms. It is to be noted that Sower refused the disabling conception of culture taken by his colleagues, and applied himself to the problem of rural development in the traditional setting.

If any country needs functional research leadership by its social scientists, Ceylon certainly does. May it be mere coincidence that both books reviewed here look sideways and backwards!

BRYCE RYAN

University of Miami

Indonesian Society in Transition: A Study of Social Change. By W. F. WERTHEIM. The Hague: W. van Hoeve Ltd., 1956. xiv, 360 pp. U. S. distributor, Institute of Pacific Relations. \$5.00.

The virtues of Dr. Wertheim's treatment of changes in Indonesian society are empiric rather than theoretic, eclectic rather than systematic. The topics selected for discussion and the somewhat mechanically chronological treatment of these topics bear evidence of this judgment. The first two chapters are a brief survey of the land and peoples of Indonesia stressing factors making for unity and diversity. Chapter Three is an excellent synoptic summary of much that follows. Chapter Four, "General Outline of Indonesian Political History," relies heavily for its theoretic orientation and substance on J. C. van Leur's *Indonesian Trade and Society: Essays in Asian Social and Economic History* (1955). Chapters V through X deal in turn with Shifts in the Economic System, The Changing Status System, Urban Development, Religious Reform, The Changing Labour Relations and Cultural Dynamics in Indonesia. The eleventh and final chapter is titled Nationalism and After. Within each chapter materials, in so far as possible, are presented chronologically in terms of the traditional Indonesian patterns, the European colonial period, the Japanese occupation and the post World War II developments. The traditional and national periods are usually brief. The emphasis throughout is on the colonial period largely because these three

centuries provide the most prolific primary and secondary source materials.

Substantively, Dr. Wertheim's presentation does not differ markedly from that which might be written in synoptic terms for all of Southeast Asia: the period of Sanskritization beginning with the Christian era which overlayed an essentially folk culture; the subsequent centuries of syncretism and socio-cultural specialization for which we have only fragmentary dynastic histories; the intrusion of Islam; close on its heels the impact of western culture; and now finally the new nationalistic syncretism. For each country of Southeast Asia the historical specificities vary, but the regularities attributable to external contacts are as impressive as the local socio-cultural particularities.

Systematic sociologists looking for theoretical interpretations of culture change will be disappointed in Dr. Wertheim's book. If he has any theoretic bias, it is Weberian. By this I mean only that he synchronizes the original and specific research of historians, historical economists, and descriptive sociologists into a running account of the major social factors of each of the four time periods he has selected. Descriptive sociologists, social anthropologists and area specialists will find his scholarship rewarding. Dr. Wertheim has read carefully and extensively in Dutch sources not usually exploited by English speaking academicians. His use of these materials greatly enriches the casual student's knowledge of an important world area.

In a brief review of such a valuable compilation there is no point in splitting hairs. The failure to differentiate "national character" from value systems, the absence of demographic considerations in Chapter III, the equivocal conclusions of the chapter on Religious Reform, are all trivial complaints. This is a first rate, informative book that will instruct the tyro and broaden the specialist in Indonesian studies. The selected bibliographies at the end of each chapter are valuable adjuncts to both the beginner and the specialist.

CORA DU BOIS

Harvard University

Cultura Indígena de Guatemala: Ensayos de Antropología Social. [Translations from the English of works originally published in the U. S.] By SEMINARIO DE INTEGRACION SOCIAL GUATEMALTECA. Guatemala: Editorial del Ministerio de Educación Pública, 1956. No price indicated.

Spanish translations of eleven articles originally published in English concerning aspects of the past and present cultures of Guatemala are contained in this book, which is the first publi-

cation sponsored by the recently formed Committee (*Seminario*) for Guatemalan Social Integration. The stated objectives of the publication are (1) to provide the members of the Committee with materials for discussion and (2) to make available to the Guatemalan reading public a core of anthropological knowledge indispensable to the understanding and eventual solution of cultural problems of national significance, e.g., the relationships between the Ladinos and Indians. While admirably satisfying these objectives, the real significance of the work is that of making available to Spanish-speaking social scientists the results of important investigations.

Considering the frequency with which anthropological materials relating to Guatemala have appeared in the last thirty years, and facing the necessity of restricting selection to brief statements representative of several areas of interest, the delicate task of choosing the articles has been successfully accomplished. Articles by Richard Adams, Gillin, Goubaud Carrera, Oliver La Farge, Mosk, Paul, Redfield, Morris Siegel, Tax and Tumin are included.

In an excellent Introduction, which has applicability to many areas of Latin America, Richard Adams outlines the results which can be anticipated by approaching the study of Guatemalan social problems through the framework of social anthropology. The articles cover five major areas of interest: (1) the historical scheme, dealing with the sequence of cultural development since the conquest; (2) the native economy, emphasizing trade patterns and subsistence; (3) social relations, including the equilibrium existing between the Ladinos and Indians; (4) psychological factors, describing psychosomatic illnesses and elements of sibling rivalry; and (5) culture change, including education, acculturation and problems confronted in establishing community health programs.

The book offers a balanced and valid cross-section of materials prerequisite to an understanding of the society and culture of Guatemala, and provides considerable insight into the nature of Guatemalan social problems. Further, it constitutes a foundation upon which more extensive reading may be based and from which additional research might be oriented.

The volume is the first of what is hoped will be many publications undertaken by the Committee for Guatemalan Social Integration. The value of such publications in stimulating the further development of social science in Latin America by Latin Americans cannot be minimized.

EDWIN G. FLITTIE

San Jose State College

Man in Society. By VERNE S. SWEEDLUN and GOLDA M. CRAWFORD in collaboration with LOUIS H. DOUGLAS and JOHN G. KENYON. New York: American Book Company, 1956. Vol. I, xii, 609 pp. Vol. II, xiii, pp. 651. \$5.50 each volume.

For almost three decades, eminent specialists and teachers in the social and other agencies have discussed the place of their subject matter in general education. The continued development of specialization and specialities assures us that the problems relevant to general education will persist. During these decades administrations have taken action, in some instances to limit specialization, and in others to promote integration. Chicago's well-publicized Social Science I and II represent one plan; Harvard's Department of Social Relations represents another; other universities have assigned department members to a core curriculum course or else have created interdepartmental committees which supervise programs. Syracuse, for example, initiated a graduate program in general social science on the belief that there was an increasing demand for advanced degrees in this field of teaching. We now appear to be in a stage characterized by the more frequent appearance of texts of several sorts as well as having at hand a more explicit and specific rationale for what we think we are doing to and for students in general social science courses. This is exemplified by Professor Johnson's recent *Theory and Practice of the Social Studies*. Finally the inevitable has occurred: funds for making a study of general education courses have been granted to Columbia University.

The preparation of texts for courses of this nature is very demanding work. Sweedlun and Crawford inform us that they prepared nine transcripts during more than a decade of work. The work is demanding because of its being done in spite of the suspicion and hostility of the dominantly entrenched specialties. We specialists suspect the inability to teach all that is attempted within the semester or year; we suspect the ability of the student to gain any useful command of principles, for it takes time to learn. But even more than this, we suspect that the general social scientist himself is almost certain to be deficient in one or more of the several perspectives required to comprehend a social system, that he faces a most difficult problem in communicating the finest of the writings from the several fields, and that the general impression is more likely to be one of inadequacy rather than competence. We have, so far, placed the general scientist on the defensive. Sweedlun and Crawford have not avoided responding to it. Being on the defensive

influences their style of writing, and their conception of the specialties and perspectives lead to paragraphs where clarity in these matters would have contributed significantly to their presentation.

Sociologists will look for a chapter to see how the authors have dealt with certain problems. Chapter 8, "Population Trends," provides a test of accuracy and interpretation. The more commonly accepted interpretation of population changes in the early phase of the industrial revolution is that deaths were reduced before births increased, and medical services, not *medical science*, are thought, along with new resources and conditions of living, to have been causal factors according to the British *Royal Commission on Population Report*, 1949, p. 6.

Economists will sample a chapter or so, possibly Chapter 24, "The Farm Problem." Here the technological developments and trends are not featured, and yet it is known that the disintegration or disappearance of the American farm is due to mechanization. The House of Representatives has shown recently that in four years 600,000 family-unit farms have just disappeared. The farmer is now declared to be the "Vanishing American," yet Sweedlin and Crawford do not discuss such a profoundly important causal factor.

The political scientists are likely to be somewhat more at ease. Chapter 10, Vol. II, "Social Reform Movements in the United States" will, upon careful examination from the point of view of general social science, stand the tests of accuracy and interpretation. Furthermore, the materials prepare a student for more advanced analyses and theories of reform movements.

The items in "Selected Readings" have been chosen with discretion and care, and it is to be regretted that the authors have not found their errors in fact and in interpretation, and thus conveyed more adequately to students the contents of these readings. With a broadly informed, competent, and dedicated teacher using these two volumes, one would expect to have an adequate course in general social science, limited to American experience and conditions.

FORREST E. LAVIOLETTE

Tulane University

A Dutch Community. Social and cultural structure and process in a bulb-growing region in The Netherlands. Publications of The Netherlands' Institute of Preventive Medicine, XXX. By I. GADOUREK. Leiden: H. E. Stenfert Kroese, N.V., 1956, xvi, 555 pp. F 25,50.

This volume resembles studies found in this country in two respects: (1) an outsider is

more objective than a local resident in uncovering the obvious social and behavior patterns; (2) descriptive analysis, per se, does not suffice in portraying the social structures and interrelationships interlocking the various segments of the community's population.

The historical, geographical, and demographic aspects of Sassenheim are presented in Part I (Description), followed by chapters on the structural organization of local government, church, family, recreation, and occupation. Quantitative data reflect the degree to which the local population's social life, values, and attitudes are affected by these social organizations.

Part II shows how the data came to be collected, analyzed, and conceptualized. Some 125 pages of much finer print are utilized for the codification of the main categories of variables as against intervening variables, work charts, and so on. Although the author intended that persons interested in methodology should concentrate on this part, it is necessary to read the first section to obtain understanding of the relevance between these two parts of the volume. One detects a note of defensiveness underlying the detailed explanation of methodological postulates, selection of concepts, and philosophical assumptions. This part may have more value for readers who do not have access to reference materials and who do not meet frequently to challenge others' concrete findings and theoretical assumptions.

Part III deals with the application of the data as they are grouped into cultural patterns. Those showing the effects of culture on personality are weak. Admittedly, the study was intended as a pioneer effort and areas requiring further investigation would be undertaken later. Even so, it is disquieting to find topics like rebellion of youth against lack of economic betterment, delayed marriage, and the insecure status of older workers treated so scantily. Any complete portrayal of a community undergoing change from agriculture to industry needs greater emphasis upon the symptoms that reveal the emergence of new values, the disruptions of established organizational patterns, and the real attitudes of the population toward ongoing social change.

ROSE HUM LEE

Roosevelt University

Modern Science and Human Values: A Study in the History of Ideas. By EVERETT W. HALL. Princeton: D. Van Nostrand Company, Inc., 1956. x, 483 pp. \$8.00.

This is a book written by a scholar but addressed to "inquisitive laymen" and to students

who desire to acquire a broad cultural background.

The book is divided into two parts, one devoted to "the attainment of the method of modern science," mainly in the fields of physics and political economy (probably, as the most "scientific" of all social sciences) and the other to the development of the views on values, mainly on the foundation of ethics, political theory and partly legal philosophy. In the two parts, the same chronological frame of reference is used: medieval mentality, Renaissance, the Age of Reason, the period of Romanticism and our own age, the age of scientism. The author's main thesis is that the gulf which has appeared since the Age of Reason between the study of facts and that of values might be overcome. He claims that values can be objectively known, though by a method at variance with that of science. He does not develop this proposition but lets us understand that he has in view a particular type of rationalism which asserts that value is to be known, "basically and in the last analysis,"

in the individual case; this sounds to be close to existentialism.

Whether the thesis is true or false, what the author offers to an educated non-specialist is of high value. By carefully selecting a limited number of representative theories in the fields mentioned above, he presents each not only with great clarity, but with deep penetration, allowing the reader to get real insight even into such difficult ideas as Einstein's theory of relativity. Of course, the manner of presentation chosen by the author forces him to skip many important developments. Thus, for instance, in the field of legal philosophy the reader is invited to jump from Bentham and Austin to Kelsen and the American realists.

The book could not be used as a text in the sociology of knowledge, but it could well serve as auxiliary reading conveying to the students the content of ideas, the social conditioning of which they can easily find in other sources. Lucid presentations of content are scarce.

N. S. TIMASHEFF

Fordham University

BOOK NOTES

Social Struktur och Politisk Aktivitet. En studie av väljaraktiviteten vid riksdagsvalet i Finland 1945–54. By ERIK ALLARDT. Helsingfors: Söderström and C:o Förlagsaktiebolag, 1956. 160 pp. No price indicated.

The diffusion of sociological theory from the United States to foreign areas is one of the healthiest signs in the discipline and bodes well for the increasing sophistication of the theory. Scandinavia, as a major recipient of American sociological thinking, as well as a continuing host to a large corps of American sociologists, is becoming a secondary testing ground for many hypotheses born in the United States. Sometimes these hypotheses hold up well under cross-cultural testing; other times, they prove to be limited, national-specific findings, without validity in other areas.

Allardt's contribution is a direct application in Finland of the "cross-pressure" hypothesis for determining voting activity or passivity (i.e., the extent to which groups of persons will or will not exercise their ballot). He notes that the hypothesis was formulated by Lazarsfeld in *The People's Choice* and refined by Lipset and his co-workers in "The Psychology of Voting." Finnish political conditions present a strong test for the hypothesis by providing multifarious combinations of pressures. Five political parties have been represented in all Finnish riksdags

since the second World War. Finland, in addition, is splintered by a volatile communist movement, and cut by the division between its Finnish-speaking and its Swedish-speaking peoples. Finally, there is the significant fact that Finland uses a proportional representation system in selecting the 200 members of its riksdag.

After threading his way through voting percentages by election districts, Allardt finds that the cross-pressure hypothesis holds up very well and provides a worthwhile predictive and explanatory instrument in analyzing Finnish voting behavior. Occasionally, a sceptic might feel that Allardt pushes and shoves beyond the call of duty to insert his data into the hypothesis, and occasionally he resorts to explaining-away techniques of somewhat flimsy virtue, but there is no gainsaying that he does a thorough and workmanlike job in applying the hypothesis to Finland. As a contribution offering concrete cross-cultural underpinning for a hypothesis in political sociology, this monograph is an excellent addition to the literature on voting behavior and its correlates.—GILBERT GEIS

Les partis communistes d'Europe, 1919–1955. Par BRANKO LAZITCH. Paris: Les Isles d'Or, 1956. 254 pp. 600 F.

This handy compendium on European communism reports comparable data on each of 25

countries in this format: first a brief historical sketch of the C.P.; next its membership and electoral statistics since its founding; finally a biographical section on leading C.P. personalities. These data, whose completeness and accuracy (within ascertainable limits) attest great diligence in the compilation, present the sociologist of politics with several interesting opportunities.

It is now feasible, with these data, to make careful analyses of the comparative distributions of C.P. members and voters in the special time-place series that constitute the "phases" of world communism. This enables us to deal with questions that are historically important and still relevant to social theory and political strategy, viz: (1) What effects on C.P. cohorts followed the "Party purity" strategy and class-violence tactics decreed by the Sixth World Congress in 1928, as compared with the "popular front" strategy and infiltration tactic ordered by the next Congress in 1935? After 1928, the Lazitch figures show, the German C.P. grew mightily; its voters had nearly doubled (3 to 6 million) by the time of the Nazi suppression in 1933. But the French C.P. took a nose dive between 1928-33—losing nearly half of its members (52 to 28 thousands) and a fourth of its voters (over 1 million to under 800,000). Elsewhere, during this period, the effects of the 1928 policy seem to depend on whether the salient opposition was democratic or fascist: the Czech C.P., under a democratic government, lost heavily; in Bulgaria and Poland, with highly visible fascist movements, the C.P. grew. Is this a spurious correlation? How on analysis, does the complete continental picture look? (2) M. Lazitch having thoughtfully collated comparable data for the Socialist Party throughout, we can now deal empirically with another classic issue from the interwar era of Marxist polemic: What are the growth-reciprocals between C.P. and S.P.? Do their respective trends show a linear or a binomial relationship (linear in one "phase," binomial in another)? Or is there, in fact, no determinate relationship? The matter is not without policy relevance today in countries like, say, Italy and France.

There are opportunities for qualitative analysis as well, e.g., are the C.P. leaders, by and large, "marginal men"; more so in one "phase" than another? As the biographies are less comprehensive than the statistics, their data-value is more limited. One is struck, reading today's newspapers, by the absence of biographical notices on Nagy and Kadar in Hungary, Gomulka in Poland. That the Soviet imperium picked this time to enter a new "phase" is no fault of M. Lazitch. He has done a difficult job well.—
DANIEL LERNER

The Pattern of Management. By LYNDALL F. URWICK. Minneapolis: University of Minnesota Press, 1956. vii, 100 pp. \$2.50.

This is a series of five lectures given at the School of Business Administration, University of Minnesota. The lecture, "The Marriage of Theory and Practice," should interest sociologists. Urwick hopes to bring scientists and practical men closer together. He poses the analyst's view of situations as a "series of 'stills'" against the executive's view of his job as one in which "kaleidoscopic shapes and colors blend and blur till they are indistinguishable." These poles are shown graphically, as is the "horology of decision," which "starts in a forgotten past" and reverberates "into an unimaginable future." In the lecture on current "management knowledge," sociologists will frown at Urwick's view that another century will be needed to build reliable knowledge on individual behavior, and "much longer" for comparable understanding of groups. But Urwick does not mean to slight our efforts, for he believes that study of management can be no more exact than its chief "contributory sciences" which include sociology and social psychology. Urwick sees too much dogmatism in current writings on leadership by the "overarticulate and underinformed, whether from the half world of quasi-scientists or the underworld of 'practical' business." He sees "leading by persuasion" as symptomatic of organizational stagnation and an admission of failure akin to the executive who must pull rank. Urwick laments the outpouring of repetitious books by professors under pressure to produce or move on. Their voluminous lack of originality forces the executive to take lessons in how to read more words per minute and to understand less.—M. D.

The Young Worker of To-Day: A New Type. By KARL BEDNARIK. Edited by J. P. MAYER. Translated by RENÉE TUPHOLME. Glencoe: The Free Press, 1955. 146 pp. \$3.00.

This is an essay in anomie. Writing against the background of Vienna, Bednark, an Austrian worker-intellectual, has depicted in ideal typical terms the new generation of workers. Compared with the older generation, the younger generation of workers, born in the inter-war years, is alienated from the socialist party, the trade union and the state. Withdrawing from public life the young worker seeks security in private pleasure pursuits and in the fantasy world of the film. Accordingly, the only revolution he is capable of is a "cinema revolution," which would break out if all the cinemas were closed. "Socialism . . . no longer yields any spiritual power over men's souls, but only

power over their physical needs; it has become a sort of insurance company for the standard of living." Relinquishing faith in utopian goals, the young worker has won "freedom at zero."

According to the author, the loss in moral commitment is partly due to the rising standard of living which is blurring class lines, and partly to the failure of socialism to develop an ideology whose underpinnings are distinguishable from totalitarianism of both the right and the left. That socialism provided few defenses against totalitarianism is attested to by the fact that the large majority of workers were converted to Fascism.

This portrait of the "young worker of to-day" is overdrawn. Assuming this type exists, is he confined to Central Europe or is he also to be found in Western Europe and in Great Britain? Would a generational comparison yield similar results for the United States? The author is aware that systematic research is needed to establish the validity of his thesis. His projected work along these lines should be of considerable interest.

The proffered solution, at the close of the essay, to the problem of the anomie worker, to wit, that intellectuals befriend and enlighten workers, is unpersuasive. Nevertheless, this is a stimulating book.—WILLIAM M. EVAN

Trends in Employment in the Service Industries.

By GEORGE J. STIGLER. Princeton: Princeton University Press, 1956. xviii, 167 pp. \$3.75.

This is the latest National Bureau of Economic Research study of employment in broad sectors of the economy.

Stigler is little concerned that there is no "authoritative consensus" on the scope of "the service industries." He presents an arbitrary list of diverse industries whose product "takes the salable form primarily or exclusively of a personal service rather than a material commodity" (p. 47). Although transportation and public utilities are omitted, because treated in earlier studies, the industries listed absorb over two-fifths of the employed labor force.

More important than establishing boundaries of the service industries in the aggregate are their classification and their characteristics. They may be classified by type of buyer (occasionally businesses but mainly ultimate consumers), expenditure categories employed in analyzing consumer behavior, and private or public organization (only in education and health is there substantial private-public competition). Very generally, the service industries are characterized by small business units, employing few workers, organized as proprietorships, with relatively little unionization, and

with a labor force composed of a relatively large share of women and of college-trained people.

Well over half the book is devoted to separate surveys of retail trade, "routine" personal services (e.g., domestic service, barber shops), professional services, and business services (the largest being wholesale trade).

In seeking to explain employment trends, several variables are used, including changing technology, progressive specialization, level and distribution of income, and population characteristics. Although treatments are brief and selective, the book is evidently a product of energetic and imaginative research.

Still it is disappointing in definitiveness of conclusions (which, in light of the data, is not surprising) and in clarity of objectives. Except for brief and scattered comments, the author felt unobliged to defend his work—as description for its own sake, economic history, an empirical basis for prediction, a contribution to "growth" theory, or as any other specified thing.—WILLIAM R. ALLEN

The Psychology of Occupations. By ANNE ROE.

New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1956. xii, 340 pp. \$6.75.

The stated aim of this book is the examination of "the broad field of relations between occupations and other aspects of life in search for a general pattern and for basic principles." The author, desiring to go beyond the mere description of occupational data, chooses Maslow's need theory as a framework for analysis. The material is organized in terms of occupations in social life; individual differences; occupational differences; and occupational choice and career patterns.

In a short review it is impossible to examine the utility or advisability of need theory for the study of occupational behavior. In any case, despite the author's dogmatic assertion that, "needs . . . must be postulated as basic in man in order to understand his history," little use is made of the Maslow theory except to postulate differential drive states as determinants of occupational choice. Indeed, the theoretical framework appears to be "tacked on" to both the beginning and end of the book with the bulk of the manuscript devoted to an annotated bibliography of research findings centering about the psychological attributes of persons in various occupations. As such, the book does not begin to approach the promise of its intent and po-

tential readers should be warned further that the summaries of research findings are, for the most part, sketchy and thus of use mainly for gaining an overview of the field.

Sociologists will find Part III of the book ("Occupations Differ") of greatest interest and use. (Part I dealing with the social setting of occupations, perhaps the poorest section, is covered in 19 pages.) Part III contains considerable material relevant to the classification of occupations for social research. The author develops a system based on "primary focus of activity" (horizontal differentiation) and "level of function" (vertical differentiation) and attempts to classify a wide variety of psychological data according to this scheme. The results, while inconclusive at this time, are highly suggestive of hypotheses concerning differential occupational roles. The book is of value too as a convenient bibliographic reference to psychological research for those interested in the sociology of work. In this regard the author's lack of any system of footnoting is an unfortunate handicap. Such an omission is inadmissible in a scholarly work.—R.J.M.

Social Responsibility in Farm Leadership: An Analysis of Farm Problems and Farm Leadership in Action. By WALTER W. WILCOX. New York: Harper & Bros., 1956. xi, 194 pp. \$3.00.

This book is one in a series of studies in ethics and economic life initiated by the Federal Council of Churches. It is an attempt to analyze some of the major economic problems confronting agriculture, "as they call for ethical decisions, and of farm organizations' current programs for dealing with them." Emphasis upon the way in which the leaders of farm organizations exert their influence upon farm legislation and administrative decisions is enlightening.

While this analysis of current farm problems is written for the layman, it is a rather concise statement on such problems as price, stabilization, the "low-income" farm problem, migratory workers, land tenure, and soil conservation. These problems are treated as they have implications for the nonfarm as well as the farm segments of society.

The point is made that farm leaders and administrators of agricultural programs must have "ethical sensitiveness" without saying just what this consists of. There is recognition of the fact that legislative and administrative decisions are determined in large part by public and private officials who must justify their actions to constituents and pressure groups.

The author feels that the leaders of farm organizations and legislators continue to support out-dated policies out of their desire to maintain their positions of power. This suggests that which many have suspected, that farm policy is rooted more deeply in stereotypes, tradition and pressure group politics than in an intelligent analysis of social and economic causes and consequences.—E. A. WILKENING

La Población del Área Metropolitana de Caracas: Factores de crecimiento y tendencia futura. Por José V. MONTESINO SAMPERIO. Caracas: Cuadernos de Información Económica, 1956. 86 pp. No price indicated.

The metropolitan area of Caracas was officially created for census and statistical purposes for the 1950 census. In October, 1955, the area enjoyed the dubious distinction of passing the million mark in population. The present work is an analysis of growth factors in the past and an estimate of future tendencies with the avowed purpose of providing a basis for city planning.

Rapid urban growth began in Venezuela slightly later than in some other Latin American countries. The study suggests that it is making up for lost time. Growth rates for Caracas exceeded the national growth rate for the first time in 1891. The author provides two projections: one predicts 1.6 millions in 1965; the second 1.9 millions.

Sr. Montesino seems well aware of pitfalls in his statistical data. He analyzes these and explains the correction factors he has applied. To a non-demographer his approach seems cautious and sensible. The only fault the reviewer finds is his tendency to compare the metropolitan area of Caracas with data concerning cities in other countries rather than with metropolitan areas. The 54-page text includes 7 maps and graphs and 17 summary tables. An appendix contains 27 more detailed tables. Bibliographers may note that the monograph is a reprint of articles appearing in *Cuadernos de Información Económica*, Nov.-Dec., 1955 and Jan.-Feb. 1956.

Of special interest to this reviewer was the fact that thus far no significant decline in crude birth rates has occurred in the metropolitan area. Despite present high rates of immigration both from abroad and from other parts of Venezuela, the author cannot foresee a decline in crude birth rates below about 30 per thousand in 1970. Crude death rates were 8.67 in 1951 and are estimated at 6.89 for 1955. These figures suggest thoughtful re-examination of the premises of those who consider rapid urbanization and industrialization as the solution to pop-

ulation problems in all underdeveloped countries.—RALPH L. BEALS

Migrations provoquées et problèmes sociaux de mobilité ouvrière. Étude exécutée pour la Communauté Européenne du Charbon et de l'Acier. Liège, [Travaux V de] l'Institut de Sociologie de la Faculté de Droit de Liège, 1956. 112 pp. No price indicated.

This is the report of a pilot study undertaken in 1955 for the "European Coal and Steel Community." Its fundamental aim is the examination and evaluation of "experiments" in order to determine the conditions for the "success" of a policy of induced migration of workers.

In Part I a general view of the labor market situation in Belgium is followed by a discussion summarizing the data available concerning different types of spatial mobility—with and without change of residence.

Part II is devoted to an examination of nine experiments of induced migrations within Belgium. Here, as in Part III, data is largely derived from governmental statistics and interviews. Emphasis is placed on the events which made the displacement necessary, on the circumstances which surrounded the decision and the organization of the displacements, on the reactions of the workers and the importance of the move, and on the impressions of persons consulted concerning the reasons for the success or failure of the removal projects. Various possible obstacles to mobility, such as may be found in the occupational situation, in the possibilities for subsistence in the present locality, age-family situations, "cultural distance" between regions, and collective pressures are discussed together with the measures which may facilitate the removal.

Part III, entitled "The Immigration of Foreign Workers in Belgium and the Social Problems of Readaptation," concentrates on the induced movements of foreign workers in and out of Belgium from 1946 to 1955; all were or are employed in the coal or steel industry. The more detailed analysis focuses on the Italian laborers who make up about two-thirds of all the immigrants who entered Belgium since 1948. In contrast to their Belgian counterparts these workers are unskilled and move not only into a new and arduous occupation but also into a new cultural milieu. The authors' estimate is that these induced migrations have been largely successful. In conclusion they point to the major problems involved in such migrations and make some general suggestions for their solution.—FRED THALHEIMER

The Delineation and Structure of Rental Housing Areas: A Milwaukee Case Study. Volume IV, No. 5, Wisconsin Commerce Reports. By HERMAN G. BERKMAN. Madison: University of Wisconsin, School of Commerce, Bureau of Business Research and Service, 1956. 144 pp. \$1.15, processed.

This study, financed by the Rockefeller Foundation as a part of the Wisconsin Housing Research Project, is an analysis of the ecology of tenant relations in Milwaukee. The main source of information is population data for 1940 and 1950 classified by census tracts. The hypothesis that served as a guide in making the investigation is that the location and characteristics of rental dwellings are oriented to the family cycle. The phases of the family cycle were defined as young adult, peak family (the stage at which the children are young and the greatest demands are made on housing and community facilities), the mature family phase and the dissolving family stage. Census tracts were classified as being predominantly peopled by families in one phase of the family cycle or another by observing proportions of children at specified age levels. Twenty-one "tenancy situations" were objectively defined, based on proportions of tenant occupancy, structure type, median year built and relative median rent level. Race and occupation data were also used in the analysis.

The summary chapter states that "... it can be concluded that tenure decisions and decisions on location are in large part determined by family cycle housing needs." (p. 139) To anyone versed in the risks connected with correlation analysis and particularly ecological correlation, this is a rather strong statement to make. The hypothesis was not that firmly established. In fairness to the author, it should be added that the statement quoted is not typical. The claims made for the study are in general considered and realistic. The research is, in fact, a carefully prepared, valuable addition to the literature of human ecology.—VERNON DAVIES

The Drug Addict as a Patient. By MARIE NYSWANDER, M.D. New York and London: Grune and Stratton, 1956. xi, 179 pp. \$4.50.

This book reflects the author's complete rejection of the punitive approach to addiction, including compulsory and arbitrary treatment as represented by the federal hospital at Lexington, Kentucky. Dr. Nyswander outlines step by step the procedures which she believes to be most effective in the rehabilitation of addicts, treating each of them as a person with his own unique problems. The personality characteristics and reactions of addicts are described

dispassionately, not as evidence of wickedness or degeneracy, but as parts of the disorder which it is the physician's or psychiatrist's responsibility to understand and treat. Her discussion shows a profound and sympathetic grasp of the addict's plight and of the difficulties of reforming him; at the same time, it is one of the most hopeful and constructive accounts in the recent literature.

The opening chapter provides a brief historical account of the way in which the problem of addiction was taken out of the hands of the medical profession in the decade after World War I. The author notes that ". . . the criminal underworld has taken over the task of treating the addict; only from this underworld can he obtain relief for his terrifying symptoms. Prevented by law from administering to the addict, physicians in the United States have had to stand helplessly as this tragedy has unfolded." (p. 1)

The next seven chapters deal with the pharmacology and physiology of addiction, the personality of the drug user, the "social pathology" of addiction, and the techniques of clinical diagnosis, withdrawal treatment and rehabilitation. The ninth chapter consists mainly of a description of the British system of narcotics control written especially for this book by a London physician, Dr. Jeffrey Bishop. The number of addicts in Britain, where doctors may legally treat addicts and prescribe drugs for them, is estimated by Dr. Bishop at about four hundred. The final chapter is a plea for the abandonment of the present punitive program in the United States in favor of something like the British plan.—ALFRED R. LINDESMITH

Alcoholism as a Medical Problem. Edited by H. D. KRUSE, M.D. New York: Hoeber-Harper, 1956. 102 pp. \$3.00.

This is a collection of eight papers read at a conference on Alcoholism as a Medical Problem jointly sponsored by the New York Academy of Medicine and the New York State Mental Health Commission. The objectives of the conference were to introduce problems of alcoholism to the physician; to create in him an appreciation of the magnitude of the disease; to encourage him to assume responsibility for the alcoholic and to stimulate research on the disease.

Apart from two papers by Shoben on the behavioristic view on alcoholism etiology and by Hollingshead on the sociological view, all of the presentations were by M.D.'s or by psychiatrists. Shoben was largely concerned with reinforcement theory as an explanation of alcoholism, whereas Hollingshead contented himself with a

general discussion of the types of studies of alcoholism pursued by sociologists. He concludes by arguing that process studies of alcoholism must be merged with ecological research before the problem of etiology can be solved.

The papers by the physicians and psychiatrists are pretty much variations of the theme that alcoholism is a disease and can be studied most profitably through its epidemiology. In the discussions (which in some ways are more interesting than the papers) at one point (pp. 94 ff.) Kaufman and also Hollingshead wisely raise the question whether alcoholism is a disease in a strict sense of that term. Granting the obvious gains made by conceiving alcoholism as a sickness, there is a distinct possibility that this kind of a conception may also place strictures on the nature and directions which research on the subject can take. The idea that alcoholism is a disease entity, with a classic form and sub-classes, or that it has a "natural history," is difficult to integrate into modern sociology in any other than analogical terms. Moreover, the thoughtful sociologist may well ask without malice whether failures of medical doctors to be of much help to the alcoholic have not been due to an over-emphasis rather than an underemphasis of alcoholism as a medical problem.—

EDWIN M. LEMERT

Some Uses of Anthropology: Theoretical and Applied. Washington, D. C.: The Anthropological Society of Washington, 1956. vi, 120 pp. \$1.50, paper.

Edited by Joseph B. Casagrande and Thomas Gladwin, this volume contains the papers presented at meetings of the Anthropological Society of Washington during the 1954-55 season which was devoted to the relationships and contributions of anthropology to the various applied fields. Selections include John Bennett, "Cross-Cultural Education Research and the Study of National Acculturation," another of the first-rate papers emanating from the SSRC research program on cross-cultural education; George Devoreux, "Normal and Abnormal: The Key Problem of Psychiatric Anthropology" in which a conceptual innovation is made in the differentiation between shamanistic derangements, ethnic neuroses and psychoses, and idiosyncratic or "ordinary" disorders; Benjamin Paul, "Anthropology and Public Health," a concise summary of contributions of the anthropological case study approach; Thomas Gladwin, "Anthropology and Administration in the Trust Territory of the Pacific Islands," containing a cogent argument that the anthropologist who wants to be useful in administration must himself become in some degree an administrator; Wil-

liam Kelly, "Anthropology and the Administration of American Indian Affairs," providing a stimulating discussion of recent events in Indian affairs; E. Adamson Hoebel, "The Study of Primitive Law," in which a compelling case is made for more research in law; W. Montague Cobb, "The Relationship of Physical Anthropology to Medicine," summarizing the history and present status of this connection.

The final appraisal paper on "Applied Anthropology, 1955" by Margaret Mead is both a brief review of developments in applied anthropology and a presentation of a few of the new theoretical problems raised by her recent expedition to the Manus of the Admiralty Islands. Her central point is that the Manus took over the whole pattern of western culture within a generation and that this transformation was accomplished with little social disorganization and individual maladjustment because it was spontaneous on the part of the people, was complete in that every part of the culture was simultaneously affected, and was made by the entire social group.

The selection of contributions for this volume was generally excellent. The absence of a paper on the relationship of anthropology to schools of business or to industrial organization reflects how far most anthropologists have moved away from these fields since the days of Elton Mayo in the Harvard Business School.—

EVON Z. VOCT

Societies Around the World: Shorter Edition. Prepared by HOWARD BECKER on the basis of the two-volume work by IRWIN T. SANDERS, RICHARD B. WOODBURY, FRANK J. ESSENE, THOMAS P. FIELD, JOSEPH R. SCHWENDEMAN, and CHARLES E. SNOW. New York: The Dryden Press, 1956. xx, 811 pp. \$6.50.

Although the editors of this compilation have not taken the readers into their full confidence and indicated in precise detail their aims in making it available, it is obviously intended principally for use as a text in social science orientation courses and to give beginning students a concept of human society as an area of study.

The chief editor of the original work is a professor of sociology as is the editor of the one volume edition. Both have had considerable experience in other countries and seem to consider that the comparing of different societies with each other is one of the best ways of developing the ability to view one's own social environment objectively. As a bilingual person who has participated all his life in two widely varying

cultures the reviewer is inclined to agree with them, although the presentations of the six societies described are not completely convincing.

Over 150 selections from 111 studies are included in the volume. All of the editors, who for some reason do not include a political scientist and an economist among their number, have made contributions to the empirical observations included yet there is considerable question as to whether the social theory presented is in many instances closely related to them. A more important weakness is the failure to indicate existing and possible relationships between social science theorizing and scientific field study. Likewise in spite of the recommendation that societies be looked at as a whole, as well as comparing segments that may be of special interest, differences between the social sciences are emphasized rather than the manner in which they have in the past and may in the future supplement, refine and enrich each other. It is the personal opinion of the reviewer that the explanatory chapters and remarks could be simplified to good advantage without endangering in any way the standing of the editors as erudite scholars.

Seven years have been spent in developing this approach to the study of human society. Several planograph editions were first used. Seminars and other discussions were held with some of the authors of the selections as well as with others familiar with the habitats and societies examined. Nevertheless critical evaluation of the development of this course is not presented even though acknowledgement is given to the contribution made by students. An objective summary of the experience gained in utilizing this material would add materially to its value and at the same time constitute a contribution to sociological knowledge. It would seem advantageous to know more than we do about those forms of social practice known as social research and social science teaching.

Attention is centered to a considerable degree on social change. The Eskimo, the Navaho and the African Baganda are presented as more stable societies and the Chinese Peasants, and the people of the Cotton South and of the English Midlands as undergoing more rapid although varying change. Whether the selections utilized are the best available or not, their general excellence is unquestionable.

This "Shorter Edition" represents a reduction from about 1200 pages in the original two volume edition to one of slightly over 800 pages.—
ROBERT CUBA JONES

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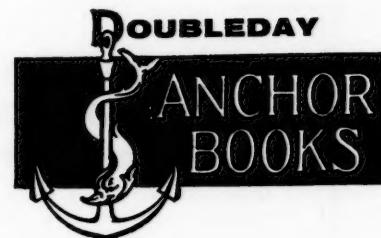
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